fueloil & oil heat

NOVEMBER 1959

★ ★ ★ EDITION

37 Years devoted to Progress in Oilheating and Airconditioning

No ✱ Gimmick needed

Stott's builder Business comes from Salesmanship

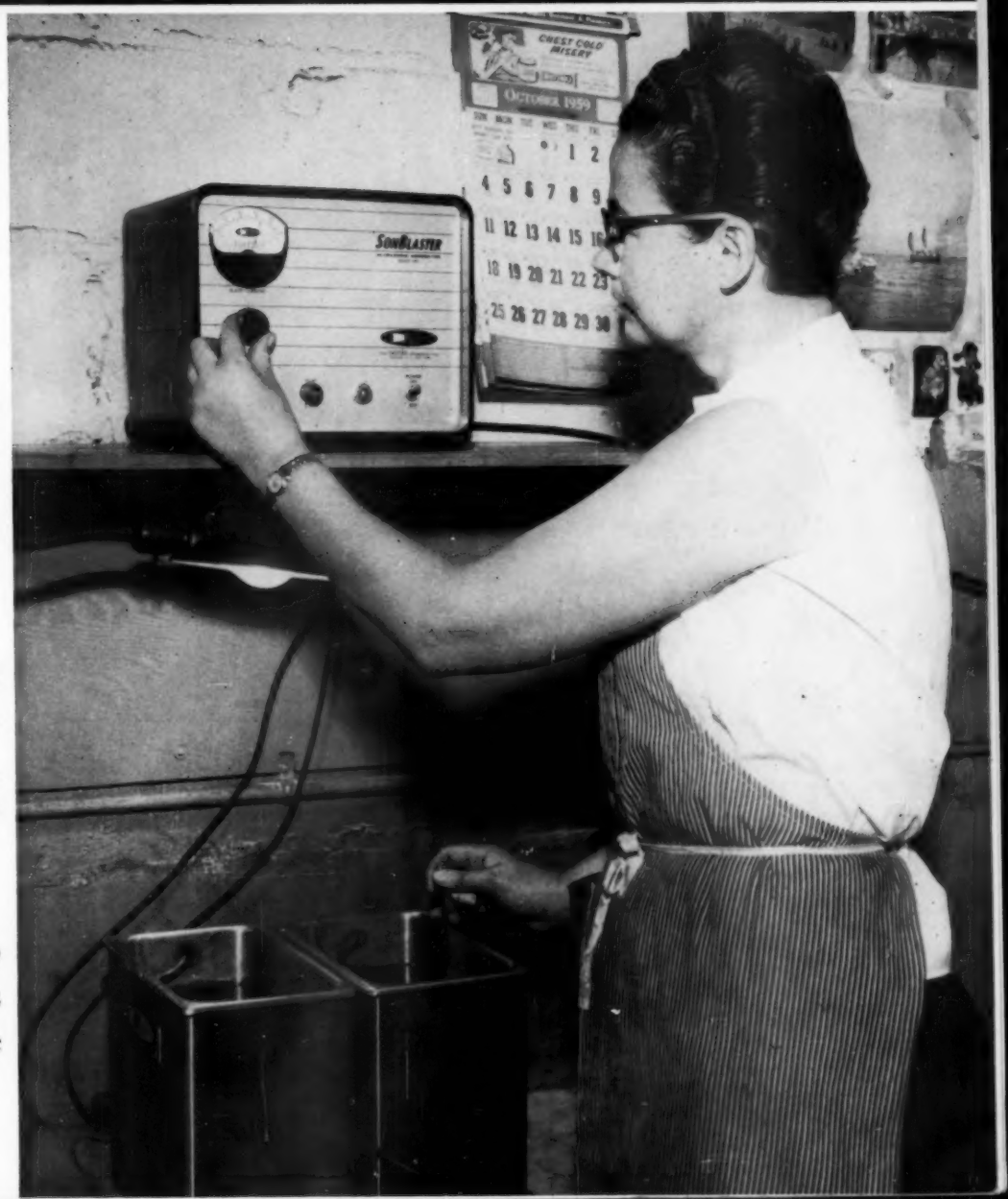
Upgrade ✱ the Evidence

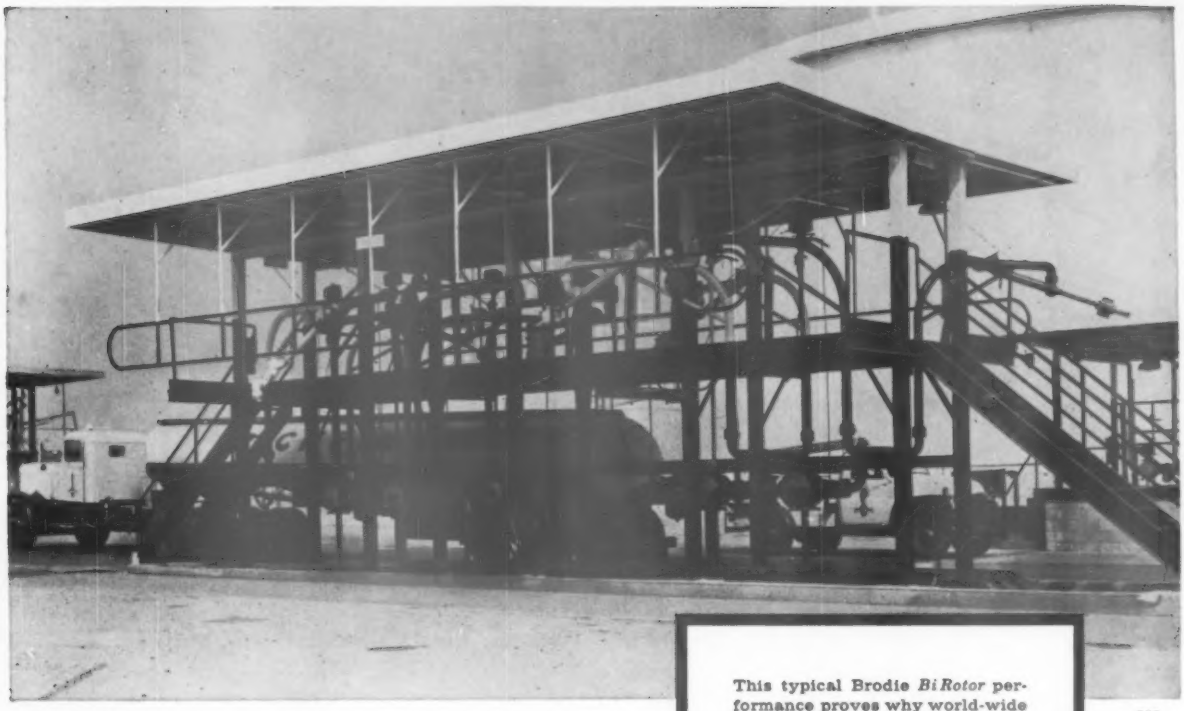
Service record System saves Time and Money

Sales via ✱ burner Know-how

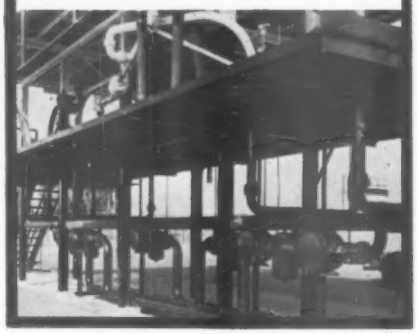
Technical Knowledge builds fueloil Sales

Truck ✱ Study shows Size, Brand, Age





This typical Brodie *BiRotor* performance proves why world-wide acceptance has grown through three decades of service. If you're planning a metering installation—call on Brodie experience—as near as your phone!



908

Here's real, low-cost maintenance

...only $1.13* per year maintenance on 10 Brodie *BiRotor* Meters...with average thruput of 3½ million gallons a month. *(per meter)

EVERYWHERE • BRODIE is linked with Progress.
Here's another example from SOUTHERN CALIFORNIA

Here are actual cost-saving facts about the durability of Brodie *BiRotor* Meters—shown by the records on Richfield's Colton Bulk Plant in California: This plant was put into operation in March, 1956 with 10 Brodie *BiRotor* Meters and accessory equipment. Average thruput is 3½ million gallons per month—gasolines, kerosene and diesel. Total expenditure for 3 years on maintenance for *BiRotor* Meters, Brodimatic Counters and Printers, and Strainers has been $33.92—$1.13 per meter! Further proof you don't have to "baby" Brodie *BiRotor* Meters—operate them at full rated capacity.

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SEATTLE 9, WASH., 221-9th Ave. N.
CHICAGO OFFICE: 1227 Circle Ave., Forest Park, Ill.
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BRODIE
BiRotor METERS

REPRESENTATIVES WITH STOCKS AND SERVICE FACILITIES IN ALL PRINCIPAL CITIES

NEW, TWO-STAGE MODEL H-7 FOR 40 GPH FIRING RATE

Now, you can get Sundstrand dependability and efficiency in a fuel unit designed to maintain a 40 gallon per hour firing rate. Sundstrand's new Model H-7 was developed specifically to meet the needs of commercial-industrial burners.

A larger diameter, deeper tooth gearset is the secret of the big increase in pumping capacity. Yet even with this increase, the design features that make all Sundstrand Model H fuel units unquestioned leaders on every type of high-lift installation, have been carefully retained.

Installation and maintenance are simplified because the Model H-7 is carefully fitted into the identical pump body as units with lower capacity. Before releasing this latest design for production, Sundstrand "proved it out" by exhaustive tests in the laboratory plus a large number of carefully observed field installations. It's available now as the latest addition to the complete Sundstrand line and backed by the know-how that keeps Sundstrand *first in fuel units*, guaranteeing performance as specified.

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Queens Boulevard, New York, N. Y.

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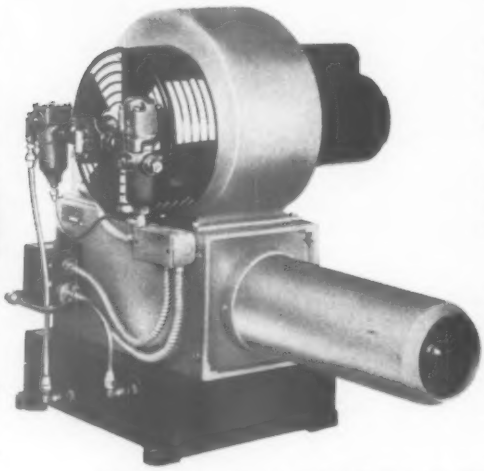

SUN-RAY #4-#5
OIL BURNER
3 SIZES—
3 to 25 G.P.H.

In factories, warehouses and apartment buildings—in schools, churches, hospitals and institutions throughout the United States, the SUN-RAY #4-#5 OIL BURNER is providing real, honest-to-goodness heating economy.

By efficiently burning low cost, high Btu #5 or #4 oil, it drastically cuts fuel bills.

Its high quality, precision construction eliminates breakdown. Servicing, when necessary, is simple, inexpensive—as easy to service as any #2 oil burner.

It's as easy to install as any #2 oil burner. With the SUN-RAY #4-#5, no transfer pump is required on normal jobs. No front plate. No unusual pitting. Special patented built-in equipment converts heavy oil to light.

The SUN-RAY #4-#5 is the cleanest, quietest, most efficient heavy oil burner sold today. It is fully automatic. There is all-electric ignition—no gas pilots.

It is approved for #5 and #4 oil by Underwriters' Laboratories, Inc., and other leading authorities.

No wonder the SUN-RAY #4-#5 OIL BURNER is the first choice of heating engineers, architects and contractors. All things considered, it is your best oil burner buy.

Get the facts. Get the Sun-Ray sales story

SUN-RAY BURNER MANUFACTURING CORPORATION

139-22 QUEENS BOULEVARD • JAMAICA 35, N. Y.

NOVEMBER fueloil & oilheat 1959

VOLUME 18 NUMBER 11

Editorial, circulation and advertising Office: 2 West 45th St., New York 36, N. Y.

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Among other things . . .

Two stories of interest this month tell about fueloil distributors who exert a great deal of effort selling oilheating equipment. The first feature begins on page 57 and tells how Stott of Fox Chase, Pa., has developed a comfortable business among builders. He doesn't use any "gimmicks"; instead he's built up effective and continuing sales contacts to sell oil heat's advantages.

The second story about Parfield Oils, Ottawa, emphasizes how this Canadian heating oil dealer uses technical burner knowledge and excellent installation and service techniques to increase fueloil volume. (Page 64.)

Both stories are good examples of the business success that can accompany the combination of oilheating equipment, fueloil service to provide heating comfort.

Cover photo: Ultra sonic cleaning as used by Sid Harvey, Valley Stream, N. Y. The operator shown in the picture is using the device to remove lapping compound from seal faces. More on Harvey's parts cleaning on page 76.

QUITE A VOLUME of rebuilt parts is being sold for repair and maintenance work in oilheating. In strong hands, it's a good business. It helps to hold down the costs of annual service and the customer is the gainer.

But recently we have been hearing of companies reconditioning oilburner nozzles and selling these to the dealer for a few cents. In our opinion this may be carrying a good thing too far. No part of an oilheating system requires greater precision in manufacture and handling in the field than a nozzle.

New ones are surprisingly inexpensive and some dealers automatically supply a fresh one with each annual tune-up. To recondition and resell an old nozzle sounds about as practical as refilling the old tooth paste tube, or putting new heads on slightly used matches.

IMPERIAL OIL's mortgage plan to get fueloil customers has touched off quite a storm in several Canadian financial and fuel circles. It made very interesting reading when announced at the end of the summer, although Imperial had been testing it in Quebec for some time.

Briefly, the plan provides help in buying a new home if oil is to be used for heat. Imperial will take a second mortgage not exceeding $1,200 at the same rate of interest as the first mortgage but not less than 6%. Canadian first mortgages being placed today are more apt to call for 7%, particularly in the West.

Quite often the financing of a second mortgage at reasonable rates makes it possible for the family to buy a home at modest down payment.

Naturally, a lot of folks are unhappy over the move, especially the gas companies and mortgage brokers. In Quebec the gas utility will match the deal.

Money for home mortgages is tight in Canada. Second mortgages carrying 7% have been requiring a "bonus" or discount of 18-20%. Thus Imperial saves the buyer upward of $200, more than offsetting the cost advantage of a gas unit to the home builder.

The second mortgage in effect is of a size to pay for a complete heating system, although not limited to that.

THE TEXAS MID-CONTINENT Oil & Gas Assn. joins the parade of free thinkers with this intelligent comment on the cheap fuel problem:

"Economic and regulatory problems involving natural gas cast a shadow over the whole petroleum industry of Texas.

"The average price of gas in Texas at the well is about 10 cents a thousand cubic feet. About 6,000 cubic feet of gas is the energy equivalent of a barrel of crude oil, but brings the producer only about 60 cents; a barrel of oil is worth $3. Low priced gas is displacing considerable oil in the fuel markets. Sometimes both come from the same Texas producer.

"This has caused an economic pinch on the industry in Texas because prices of both are not keeping up with the rapidly increasing costs for drilling wells necessary to find both oil and gas supplies."

With 48.3% of our gas produced in Texas, this is healthy thinking.

THERE'S NOTHING like keeping a heating system really simple. Some can be too simple for our health.

One day in early October a gentleman dropped in to talk about heating, a new variety, and he had been told we could give him some pointers. This man works for one of the large and best known plywood manufacturers. For some time his company technicians had been urging him to hit the street and find out how you sell it. Finally they said, "Or else," so he started.

They have a plywood heating system. Someone discovered that a special glue in plywood is an excellent resistance conductor of electricity. An electric terminal is fastened to opposite corners of a huge sheet of plywood and the entire surface heats up to 142° F. Accelerated tests have shown that the glue conductor stays put, does not deteriorate.

But since the sheet heats evenly on both sides, the man said they could probably best use it for inside partitions of new homes. They also need to revamp the grade of glue so it won't get the panels quite so warm. "Keep things simple," we always say.

DAVE LOCKLIN, who looks after the API research project for oilburning out at the Battelle Memorial Institute in Columbus, called a cab to get to the airport, and this conversation ensued:

Driver: "You fellows must travel a lot; I'm always getting calls for the airport or the station."

Dave: "Yeah, we do. We work on a great many different things for people all over the country."

Driver: "What's your line?"

Dave: "I'm looking after some studies for the fueloil industry."

Driver: "I hear it is going pretty good, but I guess we're old-fashioned; we stay with gas."

IN THE PACIFIC Northwest where most families use electricity for cooking and water heating, the gas utilities have a hard time getting away with anything in their claims for fuel costs. If gas is used for heat the whole bill is most often for this purpose.

So when the OHI of Oregon sees statements that gas for heating costs 10¢ a therm they put up their dukes, so to speak. It gets down to 10¢ only after the user has paid $9.92 each month for the higher brackets.

OHI studied 14 homes heated with gas. Over a two year period the average fuel cost for heating was 14.7¢ a therm, by checking actual bills.

WALKING THROUGH a corridor in the Pentagon Building the other day, this was the sign we saw through an open door of a room with enough disorder to indicate that the occupants really worked: "Even if you're on the right track, you'll get run over if you just stand there."

Bob Gray

YOUR PROFIT
in fuel oil marketing is dependent upon efficient delivery procedures

20 years ago curb to curb time of a domestic delivery truck averaged 17 minutes. The use of the Scully VENTALARM® Signal reduced this time so that 10 years ago curb to curb time of an efficient operator had dropped to 10 minutes.

With the introduction of the Scully UNIFIL® System and other Scully delivery aids, further time savings were made possible. TODAY the curb to curb time can be 5 minutes or less.

What is your curb to curb time?

Write today for all the facts about the Scully developments which can help you make more money!

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Fuel oil & oilheat

by James M. Collins

WASHINGTON — Congress has quit until next January, but already big oil & gas issues are starting to build up, in preparation for Congress' return, ranging all the way from a congressional study of a "national fuels policy" to tax policies affecting all of the fuels industries.

The coal industry, which first proposed a joint committee investigation of "fuels policy," got licked on this in the closing days of the last session, when oil men adamantly opposed the idea, declaring that no such thing is needed.

Pressure from Coal

But, the coal men are keeping on pressure for action early next year and indications now are that something will be done.

A preview of the coal industry's main complaints, however, is already going into the record of a joint subcommittee hearing, on automation and energy, headed by Texas Rep. Patman, also chairman of the House small business committee.

As expected, the coal industry vigorously opposes "dump" sales of imported residual fueloil, and of natural gas to industrial consumers where such use is "inferior" and coal could be substituted.

Before the same subcommittee, one of the Federal Power Commissioners, Arthur Kline, said the fact gas is the cleanest and the most convenient fuel, and enjoys a price advantage over other fuels in most areas, insures its growth—but there are several factors that could limit this.

Supply is the critical factor and signs point to difficulty in the future for gas to compete price-wise with coal and oil. Producer costs are rising sharply for gas, Kline warned, as well as pipeline costs—higher steel prices and cost of money. Finally, he pointed out, delays by the FPC in administering the Natural Gas Act will retard gas expansion.

Kline admitted that the outcome of the Phillips Case, just argued before the FPC, may provide some of the answers—but it probably will also raise many questions.

"The best hope for a speedy determination of many of these issues (on gas) is action by Congress clearly defining how we should regulate producers, but I do recognize that as a practical matter there is little prospect of this during the present Congress."

Richard Gonzalez, top official in the Humble Oil & Refining Co., soon to become the hub of the consolidated Esso Standard Oil Co., pointed out at the hearings that coal was surpassed as an energy supplier in the U. S. by crude oil in 1952 and by natural gas in 1958, because these two fuels have been "attractively priced."

But, he predicted that continued federal regulation of gas prices will do more to hurt consumers than help them, because it will cut available supplies and force the consumers to use other alternate fuels that are more expensive. But, if there are no artificial restraints, there will be plenty of oil and gas to meet all demands, so long as "reasonable incentives" exist to make large expenditures for development.

Gonzalez estimated that U. S. demand in 1959 will total about 3.5 billion barrels of oil and about 11.5 trillion cubic feet of natural gas. Annual rate of growth for oil is now about 3%, compared with 5% in former years, because of the increasing competition from gas and coal. Productive capacity for oil is estimated at about 10 million barrels daily (compared with a daily output now of about 7.1 million). Real prices for gas at the well are now at about the same levels as twenty years ago, he said, and oil is 10% under 1948.

New Gas Bill May Be Proposed

Obviously, a very important factor in all of the estimates of inter-fuel competition is highly speculative. That is: What are the prospects for legislation to eliminate, or sharply curtail, federal control of producers' natural gas prices? The answer to this will undoubtedly have a profound effect on the relative positions of all fuels in the consumer market, down the road.

Significantly, a top official of the Eisenhower Administration, Fred Seaton, Interior Secretary, has labeled the need for another gas bill a "must," pointing out that the FPC now has an impossible task in regulating gas prices. But, he warned that any bill—which he said the industry should now take the initiative to draft—must "protect consumers." He did not endorse, specifically, the Harris Bill, introduced last January. Perhaps, he believes it should be tightened up, to prevent any "runaway" gas prices in the field. But, the important point is that Seaton, reflecting Administration feelings, must feel present prices will depress supplies for consumers, and will ultimately bring on higher prices, so some relaxation of control is needed.

Seaton's views, expressed at the annual meeting of the American Gas Association at Chicago, may be followed up with some action by the FPC—in the way of a new set of rules for handling producer gas prices (perhaps on an "area" basis) to stimulate new suppliers, or by an urgent recommendation to Congress for legislation to take care of the situation.

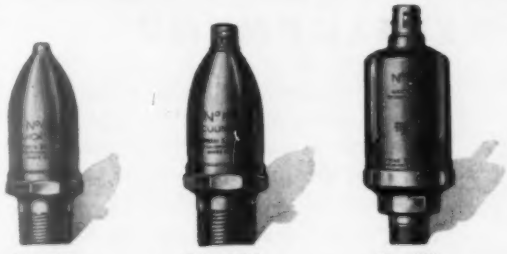
While Seaton apparently wants to put the onus on the industry for pushing another gas bill, implicit in his appeal was a promise of Administration support if the bill is "reasonable." He indicated that one facet of such legislation should be to outlaw "dump" sales of gas, competing in the coal market. (Such provisions are now in the latest Harris Bill.)

LPG Dealers to Push Sales

Meanwhile, another fuel competitor—the LPG distributors—are planning a big push to expand sales. The LPG association has OK'd $560,000 for promotion in the coming year and individual dealers are expected to spend up to another half million on their own—which will only make the fuels market still a tougher place, not easier, than now.

No. 40 No. 70A No. 2A

RADIATOR STEAM VENTS



No. 4A No. 16A No. 76

MAIN STEAM VENTS

No. 78 No. 790 No. 500

WATER VENTS

CONVECTOR STEAM VENTS

No. 1B

No. 71A

THERMOSTATIC STEAM VALVE

No. 4

AIR VALVE

No. 3

STEAM UNIT HEATER VENT

No. 74

HOFFMAN *Complete line of* VENTING VALVES

For every steam and hot water heating system—residential, institutional, industrial—Hoffman Specialty Mfg. Corp. makes the *correct* Vent Valve *for each specific requirement.* This wide range of Vent Valves is another example of the complete *quality line* of Hoffman Specialties. Whenever you need valves, pumps, traps, strainers, etc., think of Hoffman . . . write for further information.

HOFFMAN SPECIALTY MANUFACTURING CORP.
1700 WEST 10th STREET
INDIANAPOLIS 7, INDIANA

VALVES, TRAPS, VACUUM AND CONDENSATION PUMPS, FORCED HOT WATER HEATING SYSTEMS, STOCKED AND SOLD BY LEADING WHOLESALERS OF HEATING AND PLUMBING EQUIPMENT.

Fuel Oil & Oil Heat

B&G *Hydro-Flo*® HEATING A STAR FEATURE IN 3,000 HOME DEVELOPMENT

B&G BOOSTER®

The key unit of a B&G *Hydro-Flo* System —a *quiet*, automatically controlled electric pump which circulates hot water through the heating system.

At Schaumburg, Illinois, a Chicago suburb, Campanelli Brothers' Weathersfield development covers a vast acreage. The model homes shown here illustrate the price range of from $15,500 to $21,000.

These homes feature the most modern equipment for comfort and convenience, including hydronic* B&G *Hydro-Flo* Radiant Heating...a forced hot water system with copper tube floor panels.

"In deciding on this type of heating" says Mr. Al Campanelli, "we were guided by the need in this highly competitive market for a feature of outstanding sales power. Radiant heating, with its sunlike warmth, can't be equalled for genuine comfort and cleaner, quieter operation. Its warm, draftless floors guard against usual winter ills."

NOVEL DEMONSTRATOR

In the Campanelli sales office this unit offers an understandable demonstration of B&G *Hydro-Flo* Heating. The jacket is removed from the boiler, exposing the B&G Booster pump and other working parts. The cut-away section of floor shows how copper coils, embedded in the slab, provide overall, radiant warmth.

The amazingly compact house heating boiler is concealed behind the grille work of this counter top cabinet, providing added work space in the kitchen.

"HYDRONIC HOMES" SALES PROMOTION FOR BUILDERS

A comprehensive program of ideas and sales helps for utilizing the outstanding and exclusive advantages of *hydronic** heating. Every builder should see this presentation—there's no obligation in getting the facts. Write, phone or wire today.

Hydro-Flo* *Modern hot water heating.*

Hydro-Flo® SYSTEM

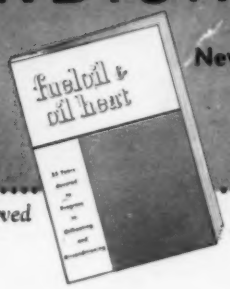
BELL & GOSSETT COMPANY

Dept. FY-7, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto 16, Ontario

Oilheating & Airconditioning
MERCHANDISING NEWS

2 West 45th Street New York 36, N. Y.



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Monthly Oilheating Trends

SEPTEMBER brought a pretty good notch in our curve which had been running upwards so pleasantly for several months. Possibly because of disruption due to the steel strike both in unemployment and lowered morale the domestic installations of oilheating were off 2% from the same month last year.

The estimate for the month is 66,868 compared with 68,046 in September 1958. This is probably a temporary position and could be rather quickly corrected when the nation's economy settles down.

For the first three quarters of the year, total installations are estimated at 438,334, up 11% from last year's 393,181. By types of installations, the September sales were: New Homes, 18,102; Replacements of old oilheating, 21,339; and Conversions from other fuels 27,427. For the full nine month period new home jobs were 140,576 compared with 125,400 in 1958; Replacements of old oilheating, 152,689 against 117,112; Conversions from other fuels, 145,069 were modestly below last year's 150,669.

In spite of the small drop in September, manufacturers generally were feeling fairly optimistic and reflecting this in enlarged sales effort to the dealers.

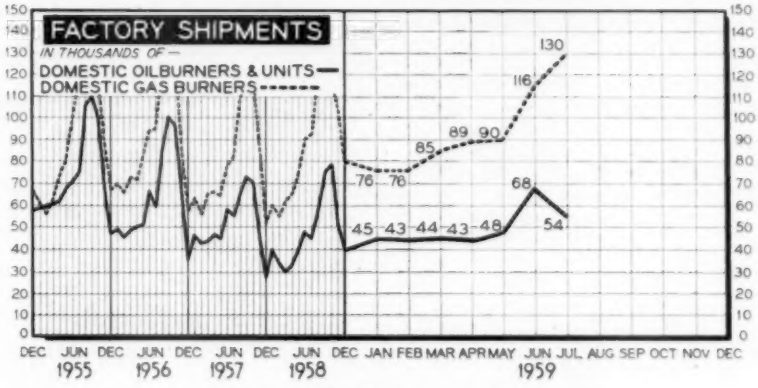
Oilheating dealers in September installed 1,529 central airconditioning jobs; they also put in 2,210 oilfired water heaters with power burners.

Oilheating Stocks: Dealers had on hand at the end of September approximately 50,636 domestic oilburners and units compared with 68,374 a month earlier and with 86,210 on the same date last year. Current stocks were divided: Separate Burners, 26,837; Boiler-burner units, 9,621; and Furnace-burner units, 14,178.

Factory stocks at the end of July were 55,478 which is the high point for this compared with 49,243 at the end of July last year. In fact the July 31 stocks were at the high point in two years.

Tank Stocks: At the end of September dealers were holding approximately 26,406 customer oil tanks compared with 49,461 the previous month and with 26,594 a year earlier. It is obvious the stocks had built up to a peak through August, again because of the steel strike and during September the pricing was a little too strenuous for our people.

By sizes tank stocks were divided: 220-275 gal. 24,580; sizes 500 to 675 gal. 1,003; over 1,000 gal., 773.



Shipments of Oilburners and Units
(Including Exports)

Adjusted to include manufacturers other than those reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	JULY			SEVEN MONTHS		
	1959	1958	Percent Change*	1959	1958	Percent Change*
Separate Burners	36,132	28,505	+26.8	246,199	177,261	+38.9
Boiler Burners	5,183	3,874	+33.7	24,828	20,399	+21.7
Furnace Burners	12,634	12,223	+ 3.4	76,299	71,391	+ 6.9
All Domestic	53,949	44,602	+20.9	347,326	269,051	+29.1
Commercial	3,203	2,816	+13.7	22,377	18,433	+21.4
Total	57,152	47,418	+20.5	369,703	287,484	+28.6

*The 1959 figures are not directly comparable to 1958 since the Census Bureau has changed its base from which total shipments are estimated by them.

September Minimum Retail Prices Key Dealers

	Sept. Avg.	Aug. Avg.
Separate Burners	$315	$314
Boiler Burners	738	738
Furnace Burners	617	617

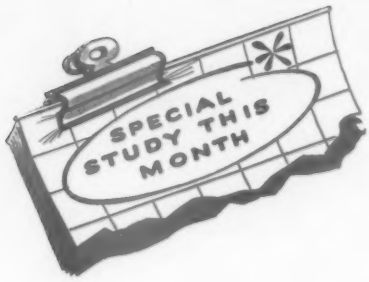
Price Index: Separate Burners 1947-49 is 100%

WHOLESALE

September	94.7	Six months ago	94.7
August	94.9	Year ago	96.7

RETAIL

September	92.2	Six months ago	92.7
August	92.2	Year ago	93.2



Cooperative advertisings Campaigns, are they helping to increase Sales?

PERHAPS a series of questions on this subject would be a little like asking a preacher to vote for virtue against sin but even so it is good to check the things the dealers are willing to say about the campaigns going on throughout the country in 53 markets East of the Rockies, plus quite a few in a big campaign for the Pacific Northwest.

We first asked if the dealers believed that the cooperative ad campaigns are helping to increase sales. The table shows the percentage voting yes and is separated between two types of dealers, those who are investing in such a campaign and those not investing.

Of course, some of the non-investors are in markets that have no campaigns and in many instances they would be glad to support a project if it were started. On the first question, we see in the table that 77% of the investors say that they help, as do 57% of the non-investors.

The next question asked if the campaigns are helping us hold present oil customers. The investors voted 89% yes; and the non-investors 76%. The table shows the sectional variations.

The next question had to do with cost impressions, in other words, whether the advertising makes folks less concerned as to the cost of the fuel. The table shows more divergence of opinion on this point with 63% of the investors voting yes and 49% of the non-investors.

Some industry men believe that the ad campaigns have caused the local oil companies to render better service in trying to live up to the claims. The table shows that 91% of the investors vote yes on this point and 64% of the non-investors.

Among those companies that have invested in the campaigns, 93% vote that they consider the money well spent. The other 7% are not sure.

In the fueloil business, capital values are pretty high including the goodwill value of long range fueloil accounts. The question then arises as to whether these cooperative campaigns by glorifying oil heat make the individual company worth more from a capital standpoint. The table shows that 83% of the investors and 71% of the non-investors believe that it works this way.

In the operation of the local programs, most committees are made up of fueloil distributors and representatives of major oil companies. There has been considerable comment on how this close relationship improves industry relationships and friendly understanding between these two groups.

The table shows that 84% of the investors and 66% of the non-investors are convinced that friendly relations have been enhanced by the arrangement.

Next, we asked the group if they believed the present source and method of getting the money was satisfactory. We find in the table that 81% of the investors and 70% of the non-

Are Campaigns helping Sales?

PERCENT VOTING "YES"

	Investors	*Non-Investors*
New Eng.	88%	11%
Mid-Atl.	69	93
South	92	100
Midwest	75	43
Pac. N.W.	88	..
All Sec.	77%	57%

Helping hold present Customers?

PERCENT VOTING "YES"

	Investors	*Non-Investors*
New Eng.	100%	89%
Mid-Atl.	85	94
South	100	100
Midwest	83	63
Pac. N.W.	100	..
All Sec.	89%	76%

Less concerned about Cost?

PERCENT VOTING "YES"

	Investors	*Non-Investors*
New Eng.	56%	44%
Mid-Atl.	57	50
South	83	100
Midwest	67	57
Pac. N.W.	81	..
All Sec.	63%	49%

Do oil companies try to live up to the claims?

PERCENT VOTING "YES"

	Investors	*Non-Investors*
New Eng.	95%	78%
Mid-Atl.	89	50
South	92	50
Midwest	92	100
Pac. N.W.	93	..
All Sec.	91%	64%

Make your company worth more?

PERCENT VOTING "YES"

	Investors	*Non-Investors*
New Eng.	82%	43%
Mid-Atl.	76	73
South	100	100
Midwest	87	100
Pac. N.W.	92	..
All Sec.	83%	71%

Improve friendly relations with oil suppliers?

PERCENT VOTING "YES"

	Investors	*Non-Investors*
New Eng.	88%	62%
Mid-Atl.	80	72
South	89	50
Midwest	87	83
Pac. N.W.	80	..
All Sec.	84%	66%

Is present method of getting the money O.K.?

PERCENT VOTING "YES"

	Investors	*Non-Investors*
New Eng.	76%	60%
Mid-Atl.	80	77
South	95	100
Midwest	79	83
Pac. N.W.	88	..
All Sec.	81%	70%

investors vote in favor of the present financial arrangement. This probably would have been expected as the refiners through the National Fueloil Council match the dealers funds dollar for dollar.

There has been considerable discussion as to whether the campaigns should be operated by local committees as they now are or if there should be national supervision of copy themes etc. On this question there is considerable difference of viewpoint. The table shows that the present investors vote 81% to keep them local; while only 48% of the non-investors think the management should be local. In other words, the majority of that latter group favors national control.

Should programs be kept local?

PERCENT VOTING "YES"

	Investors	*Non-Investors*
New Eng.	84%	88%
Mid-Atl.	76	42
South	76	67
Midwest	75	44
Pac. N.W.	100	..
All Sec.	81%	48%

Some interesting comments this month were these—

"Don't believe we are reaching the people we want through newspapers; the Southeastern Wisconsin group has hit upon an excellent idea to reach the new home builder. We should be in the magazines the builder is reading."

"Cooperative campaigns are o.k., but as long as oil is higher priced than gas and the heating equipment costs more than oil, we will continue to lose customers to gas heat."

"Larger number of major oil companies should support the program; there should be one unified association to include all segments; local campaigns should be directed at builders and the national program directed at the mass market."

"Although we have no local program (New Hampshire) I feel that the people in the area have been impressed with the program as it reaches them from Boston." . . .

"Local men can change the pitch more readily to combat a local gas story—this is important." . . . "Believe a more efficient campaign can be established through a merger of the lesser organizations into a central body to handle ads on a national level. Oil advertising today seems somewhat amateurish compared to gas." (Mass.)

"Price alone has never been the main object in purchasing; the co-op ad campaign upgrades the oil industry and places the dealer on a higher plane. It is most important." . . .

"I am chairman of the local housing authority building 40 units for the elderly; oil and gas have not been able to come up with cost estimates they can back up, but the electric company has a complete set of plans and a guaranteed figure." . . .

. . . "I never believed the price emphasis helped much, particularly when the price increased every cold snap during the winter."

Oilburner Permits*

SEPT. 1959		9 MONTHS 1958	1959
5	Albany, N. Y.	22	14
48	Baltimore, Md.	282	214
86	Bridgeport, Conn.	539	474
..	Brooklyn	3,779	..
3	Columbus, O.	22	55
18	Detroit, Mich.	244	230
51	Elizabeth, N. J.	297	307
13	Freeport, N. Y.	100	110
27	Hartford, Conn.	447	520
23	Irvington, N. J.	141	167
55	Meriden, Conn.	311	312
40	Milwaukee, Wis.	348	216
..	Minneapolis, Minn.	136	..
9	Montclair, N. J.	103	77
8	Morristown, N. J.	..	23
73	Mt. Vernon, N. Y.	264	301
..	Newark, N. J.	579	..
57	New Bedford, Mass.	432	442
44	New Haven, Conn.	186	432
..	New Rochelle, N. Y.	101	..
18	Norfolk, Va.	211	175
3	Omaha, Neb.	40	46
12	Orange, N. J.	79	39
6	Passaic, N. J.	51	43
24	Paterson, N. J.	173	166
..	Philadelphia, Pa.**	963	..
72	Portland, Me.	353	368
150	Portland, Oregon	1,354	855
7	Poughkeepsie, N. Y.	56	75
46	Providence, R. I.	299	269
37	Richmond, Va.	238	289
80	Roanoke, Va.	779	563
44	Rochester, N. Y.	407	366
5	Rockville Centre, N. Y.	36	33
32	Salem, Mass.	206	203
95	St. Louis, Mo.	907	418
11	St. Paul, Minn.	39	52
5	Schenectady, N. Y.	24	53
..	Spokane, Wash.	178	..
118	Springfield, Mass.	586	538
10	Stamford, Conn.	92	131
24	Washington, D. C.	308	225
14	White Plains, N. Y.	126	106
12	Wilmington, Del.	117	91
95	Worcester, Mass.	564	545
..	Yonkers, N. Y.	165	..
	Matched Totals	10,784	9,520
	Percent Change		—11.7%

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.

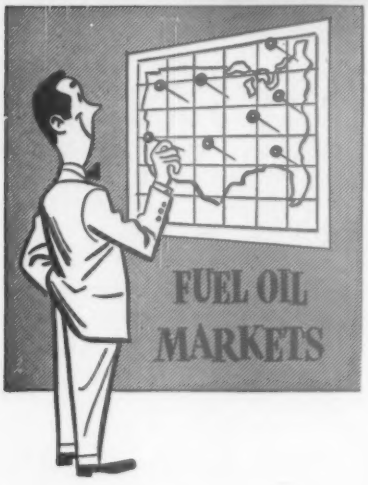
**Courtesy of "Philadelphia Inquirer."

Where is the

New home Market?

	No. of Permits Issued	
	July	*7 Mos.*
Alabama	1,385	12,408
Arizona	1,332	14,440
Arkansas	222	2,166
California	18,946	143,847
Colorado	1,584	9,232
Connecticut	1,609	10,495
Delaware	324	1,344
District of Columbia	87	519
Florida	7,931	48,727
Georgia	1,846	13,091
Idaho	166	1,139
Illinois	5,743	35,148
Indiana	2,181	9,954
Iowa	906	4,930
Kansas	916	5,977
Kentucky	769	5,350
Louisiana	1,362	9,836
Maine	133	642
Maryland	2,737	17,390
Massachusetts	2,126	12,242
Michigan	3,906	22,942
Minnesota	1,812	10,766
Mississippi	265	2,027
Missouri	2,079	19,739
Montana	199	1,137
Nebraska	608	4,247
Nevada	115	2,035
New Hampshire	153	971
New Jersey	3,055	20,468
New Mexico	514	5,441
New York	7,143	60,385
North Carolina	1,293	8,256
North Dakota	242	1,172
Ohio	5,384	32,431
Oklahoma	847	6,381
Oregon	888	5,170
Pennsylvania	3,141	24,179
Rhode Island	251	1,509
South Carolina	330	2,748
South Dakota	201	1,191
Tennessee	1,275	10,044
Texas	6,835	47,914
Utah	792	4,845
Vermont	29	122
Virginia	3,904	17,678
Washington	2,022	14,624
West Virginia	196	2,243
Wisconsin	1,843	11,460
Wyoming	101	776

Greater detail on permits within the individual states is included in a booklet, "New Dwelling Units authorized by local Building Permits," issued monthly by the Bureau of the Census, U. S. Dept. of Commerce, Washington 25, D. C.



TALKING TO a small group in Minneapolis, Dr. Irving P. Krick, dean of the professional long range forecasters, outlined the winter ahead as he sees it. He was speaking for Minneapolis and predicted much greater degree day accumulations in the early part of the season, but the total for the winter will be approximately the same as last year.

Then he mentioned that on the Atlantic Seaboard, November will be quite severe, but that by the end of December the accumulated degree days will be considerably below that point in 1958. Then he indicated that the total degree days for the season in the East will be considerably less than last year.

The occasion for his appearance was an announcement by the Minneapolis-Honeywell Co. that starting next spring Dr. Krick will do some radio broadcasts for them outlining his forecasts for the season ahead.

Distillate Fueloils

PRIMARY STOCKS*
(Thousands of Barrels)
East of Rockies

	Oct. 16 1959	Oct. 17 1958
East Coast	76,120	61,938
Midwest	52,760	52,583
Gulf Coast	33,008	29,313
Total	161,888	143,834

SECONDARY STOCKS**
East of the Rockies

	Percentage filled on September 30		
	1959	1958	1957
New England	66.7%	72.7%	76.9%
Mid-Atlantic	82.6	72.9	70.8
South Atlantic	32.0	42.8	45.8
Total East Coast	73.5	70.1	70.1
Midwest	75.3	69.6	81.6

*American Petroleum Institute.
**Estimated by FUELOIL & OIL HEAT.

No. 2 Heating Oil (Including No. 3 & PS200)

Price per gallon as of October 15, 1959

	Tank Car	Tank Wagon†
Portland, Me.	10.0(A)	14.6
Boston	9.9(A)	14.4
Providence	9.9(A)	14.1
Hartford	10.15(A)	14.2
New Haven	9.80(A)	14.3
Syracuse	10.60	14.6
Albany	9.50	14.0
New York	9.80(A)	13.7
Newark	9.80(A)	13.8
Philadelphia	9.80(A)	13.9
Baltimore	9.80(A)	14.1
Wilmington, N. C.	10.10(A)	13.7
Washington	10.10(A)	14.4
Richmond	10.20(A)	13.8
Charleston, S. C.	10.1(A)	13.43
Chicago	9.625*	14.1
Detroit	10.25*	15.1
Cleveland	11.10*	15.6
Minneapolis	9.679	14.2
St. Louis	10.10*	14.9
Indianapolis	10.39*	14.9
Milwaukee	10.225*	14.9
Des Moines	10.55	14.7
San Francisco	12.05*	14.8
Portland, Ore.	12.1*	15.1
Seattle	12.2*	15.2
Spokane	13.8*	16.8
Los Angeles	11.55*	14.3

Tank wagon prices shown are for maximum one-time delivery discounts.

*Delivered.

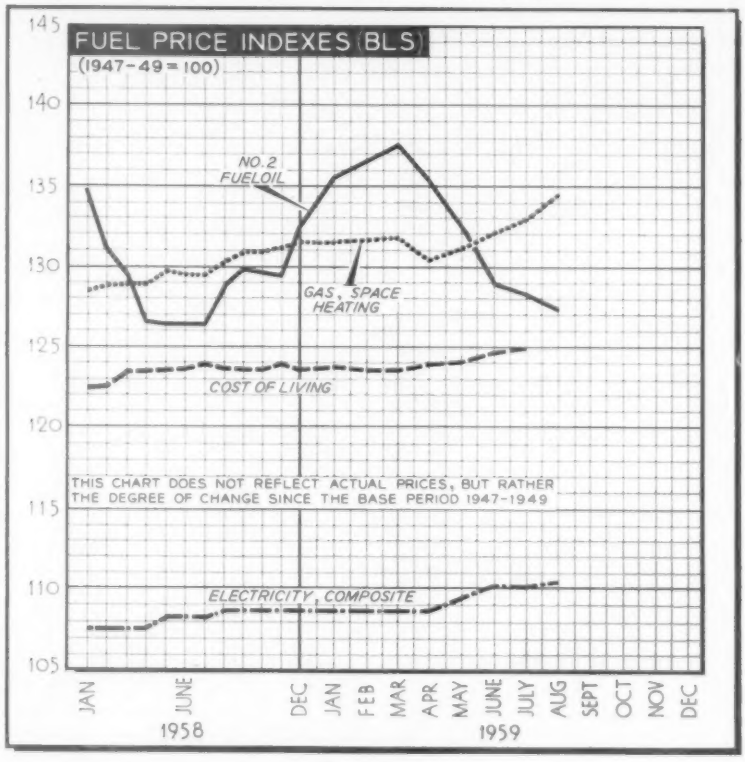
(A) 0.50¢ vol. allowance.

†Tank car prices are typically those paid by fueloil distributors as a purchase price. On the West Coast this term more often indicates a retail sale to a large commercial account. This often a half cent below tank wagon price.

Degree Day Table

SEPT. 1959		TOTAL SEASON Normal	'58-'59
143	Albany AP	6888	7136
8	Atlanta AP	2826	2797
28*	Baltimore AP	4782	4786
79	Boston AP	5742	5870
111	Buffalo AP	6720	6804
2	Charlotte NC AP	3205	3245
62	Chicago AP	6252	6249
35	Cincinnati CO	4532	4895
78	Cleveland AP	5950	5938
0	Dallas AP	2272	2444
191	Denver AP	6051	5805
131	Des Moines AP	6384	6504
92	Detroit AP	6336	6423
109*	Grand Rapids CO	6396	7044*
115	Hartford AB	6094	6552
351	Helena AP	7951	7944
0	Houston AP	1388	1469
54	Indianapolis AP	5581	5760
44	Kansas City AP	4880	4613
0	Los Angeles CO	1432	726
11	Louisville AP	4434	4408
117	Milwaukee AP	6944	7402
152	Minneapolis AP	7748	7566
0	New Orleans CO	1175	1298
40	New York CO	5032	5110
115	Omaha AP	6123	6083
28	Philadelphia CO	4523	4722
55	Pittsburgh CO	5035	5158
181	Portland, Me. AP	7493	7685
114	Portland, Ore. CO	4046	3731
101	Providence AP	6041	6073
28	Roanoke, Va. AP	4152	4094
30*	St. Louis CO	4462	4744*
170	Salt Lake City AP	5785	5263
73	San Francisco CO	2523	1831
231	Sault Ste. Marie AP	9016	9231
167	Seattle CO	4237	3998
98	Toledo AP	6322	6477
28	Washington AP	4337	4168

*Airport Office.



GETTING YOUR SHARE . . .

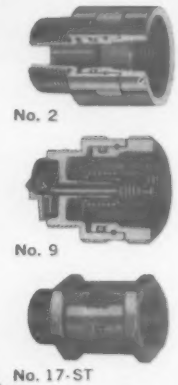
takes more than luck in today's competitive fuel oil business. You need steady aim, good equipment, plus the special know-how that bags a customer while competitors are looking around to see who's doing the shooting. For over three decades, HARTOL's unsurpassed experience has been lined up with crack independents who "get their share"— and more. HARTOL provides 16 convenient, modern terminals, storage for peak operation, and dependability under *all* conditions. Get the greatest service story in the entire industry from your HARTOL representative.

- Largest independent marketer of gasoline and fuel oil on the Eastern seaboard.
- First in experience . . . cooperation with independent jobbers and dealers . . . ability to serve.

HEATING OILS • GASOLINE • KEROSENE

HARTOL PETROLEUM CORPORATION
630 FIFTH AVENUE • NEW YORK 20, NEW YORK

HARTOL



OPW
HOSE
SWIVELS

Prevent Hose Kinks!

Strongest link in your hose line . .

WON'T PULL APART!

- NO HAZARD
- NO PRODUCT LOSS
- MAXIMUM HOSE LINE FLEXIBILTY

Make your hose easier to handle . . . add to its life . . . eliminate twisting, kinking and tension resulting from rotary motion. Use OPW's leakproof swivels with liquids dispensing nozzles and on industrial hose installations. Turns freely at line pressure up to 125 psi.

FREE BULLETIN F-37 provides interesting facts.

OPW CORPORATION
2723 Colerain Ave.
Cincinnati 25, Ohio
Klrby 1-5400

Names in the News

Lauren E. Seeley has been elected president, H. B. Smith Co., Inc., Westfield, Mass. He succeeds *Franklin A. Ferguson,* who has become honorary vice-chairman of the board. Seeley joined the company in 1955 when he became vice-president of engineering. However, he has served as engineering consultant to the firm since 1925. He was Dean of Technology at the University of New Hampshire and was president of the American Society of Heating and Ventilating Engineers in 1951.

John S. Robinson has been named manager of distribution development, Typhoon Air Conditioning Co., Division of Hupp Corp., Brooklyn. He was formerly director of the Air Conditioning and Refrigeration Institute's SMAC program, an industry activity to "Sell more airconditioning." Before that he was sales manager of heating and airconditioning products, Permaglas Division, A. O. Smith Corp.

R. F. Paling has been appointed sales engineer, Appliance Control Department, General Electric, Morrison, Ill. He will be responsible for the sale of heating controls to original equipment manufacturers. In addition he will coordinate field sales efforts of district sales engineers in Pennsylvania, New York, New Jersey and New England.

Tattle
DOT 7C
Tale

OIL TANK GAUGE

★ DESIGNED FOR PERFORMANCE
★ MANUFACTURED FOR QUALITY
★ PRICED FOR VOLUME SALES

Better 7 WAYS

1. An easy-to-read scale that is plainly visible in even the darkest places.
2. All-weather plastic top and guaranteed overall rugged construction.
3. Designed and engineered for inside or outside installation.
4. Heavy die-cast plug.
5. SPRING STEEL flexible float rod.
6. All moving parts hinged on durable BRASS pivots.
7. No maintenance, repair or regulation after installation.

for 1½" and 2" OPENINGS

Dot 7-C®

homeward Products Inc.

3420 S. W. 9th St.
DES MOINES, IOWA

Mr. Dealer

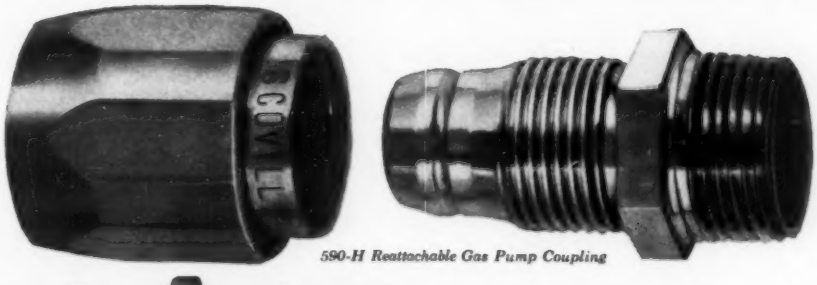
Stock this fast-selling gauge with many exclusive features not found in higher priced gauges.

WRITE TODAY FOR OUR LOW PRICES AND SAMPLE GAUGE

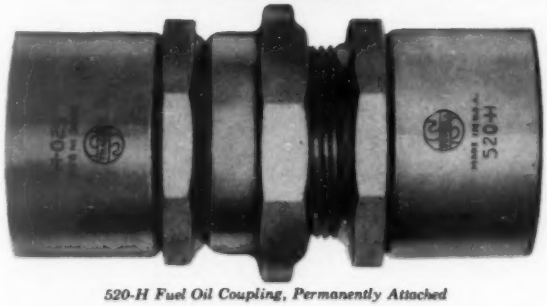
FIRST, FINEST, FASTEST

Scovill, who developed and introduced the permanently-attached hose coupling, provides the finest service and fastest delivery in the industry today. It pays in three important ways to specify permanent or re-attachable couplings by Scovill. 1 FIRST—Scovill has more know-how on the correct applications, uses and maintenance of hose couplings. Scovill was the first to design and manufacture couplings for modern hose and is the leading supplier of fuel oil and gas pump couplings. 2 FINEST—Only Scovill gives you such fast, efficient service because only Scovill has a nation-wide network of sales offices and warehouse facilities. 3 FASTEST—Coupling orders received by Scovill are shipped immediately. Scovill makes and stocks a complete range of fuel oil and gas pump couplings. And the Scovill sales and service force—the largest and finest in the industry—is ready to consult with you anywhere and anytime. *For complete details, write: Scovill Manufacturing Company, Hose Coupling Department, Waterbury 20, Connecticut.*

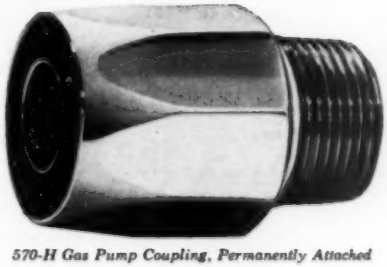
Hose couplings by **SCOVILL**



590-H Reattachable Gas Pump Coupling



520-H Fuel Oil Coupling, Permanently Attached



570-H Gas Pump Coupling, Permanently Attached

MAIN OFFICE: 99 Mill Street, Waterbury, Conn. CLEVELAND: 4635 W. 160th Street LOS ANGELES: 6464 E. Flotilla Street HOUSTON: 2323 University Blvd. SAN FRANCISCO: 434 Brannan Street TORONTO: 334 King Street East

Rig Your Reels With "LONG-LIFE"

Speed-up Deliveries ...Reduce Your Hose Replacement Costs!

MOLDED AND BRAIDED

BROWN "SYNPLASTIC"® COVER

"LONG-LIFE" FUEL OIL HOSE is built to assure quicker, lower-cost deliveries and *additional* savings through longer service before replacement. *Complements new tight-fill systems.*
Light weight and extremely flexible—easier to carry out and re-reel—more stops per truck per day—more oil delivered—less work for the driver. Tough, wear-and-weather-resistant "Synplastic"® cover. Sizes 1", 1¼", 1⅜", 1½", in maximum lengths of 175 feet.

Mail Coupon for Complete Information

Goodall Rubber Company Date_____
Whitehead Rd., Trenton 4, N. J.
☐ Send Catalog and Prices of "LONG-LIFE" Fuel Oil Hose.
☐ Have Representative call from nearest Branch.
Company_____
Address_____
City_____ Zone_____ State_____

"If it's GOODALL, it MUST be Good!"

Standard of Quality—Since 1870 HOSE • BELTING • FOOTWEAR • CLOTHING AND OTHER INDUSTRIAL RUBBER PRODUCTS

GOODALL *Rubber Company*

GENERAL OFFICES, MILLS and EXPORT DIVISION, TRENTON, N. J.
BRANCHES AND DISTRIBUTORS THROUGHOUT THE UNITED STATES.
IN CANADA: GOODALL RUBBER CO. OF CANADA LTD., TORONTO.

F. M. "Milt" Jordan has been promoted to sales manager, Industrial Combustion, Inc., Milwaukee, Wis. He assumes the responsibilities previously held by William J. DeMuth, who resigned to enter his own business. Jordan was formerly national sales manager for the Heil-Quaker Corp. and joined Industrial Combustion in 1958.

Robert J. Upton died early in October at Norfolk, Va., at the age of 78. Upton joined Cornell Utilities, Inc., Brooklyn, N. Y., in 1929 as a salesman, later became assistant sales manager and then sales manager. John O. Bloomberg, Cornell Utilities vice-president, paying tribute to Upton, revealed that he was active right up to his last days and that his death represented the loss to the oilburner industry of an outstanding salesman, "the type which is hard to replace."

John Mueller, II, has been appointed director of advertising, Enterprise Division, General Metals Corp. and Enterprise Engine & Machinery Co., San Francisco. He will also direct the advertising of the Foundry and Forge Division. Mueller had been assistant advertising manager and prior to that he was Pacific District advertising and sales promotion manager for American-Standard.

William W. Eversmann has been appointed a director of Hartol Petroleum Corp., New York. He has been with the company for 12 years and was district manager in the Maryland and District of Columbia area before transferring to New York as general sales manager in 1958. He was made a vice-president early in 1959. *William N Gray* recently became assistant sales manager.

OIL BURNER PRIMARIES General Controls builds quality primaries...sturdy...simple ...service-free. And a complete line of heating controls for all warm air and hydronic systems—assuring you of *permanently satisfied customers.* Field service by specialists from 42 Factory Branch Offices... stocks in conveniently located warehouses throughout the United States, Canada and Western Europe. Call in your local General Controls factory representative today.

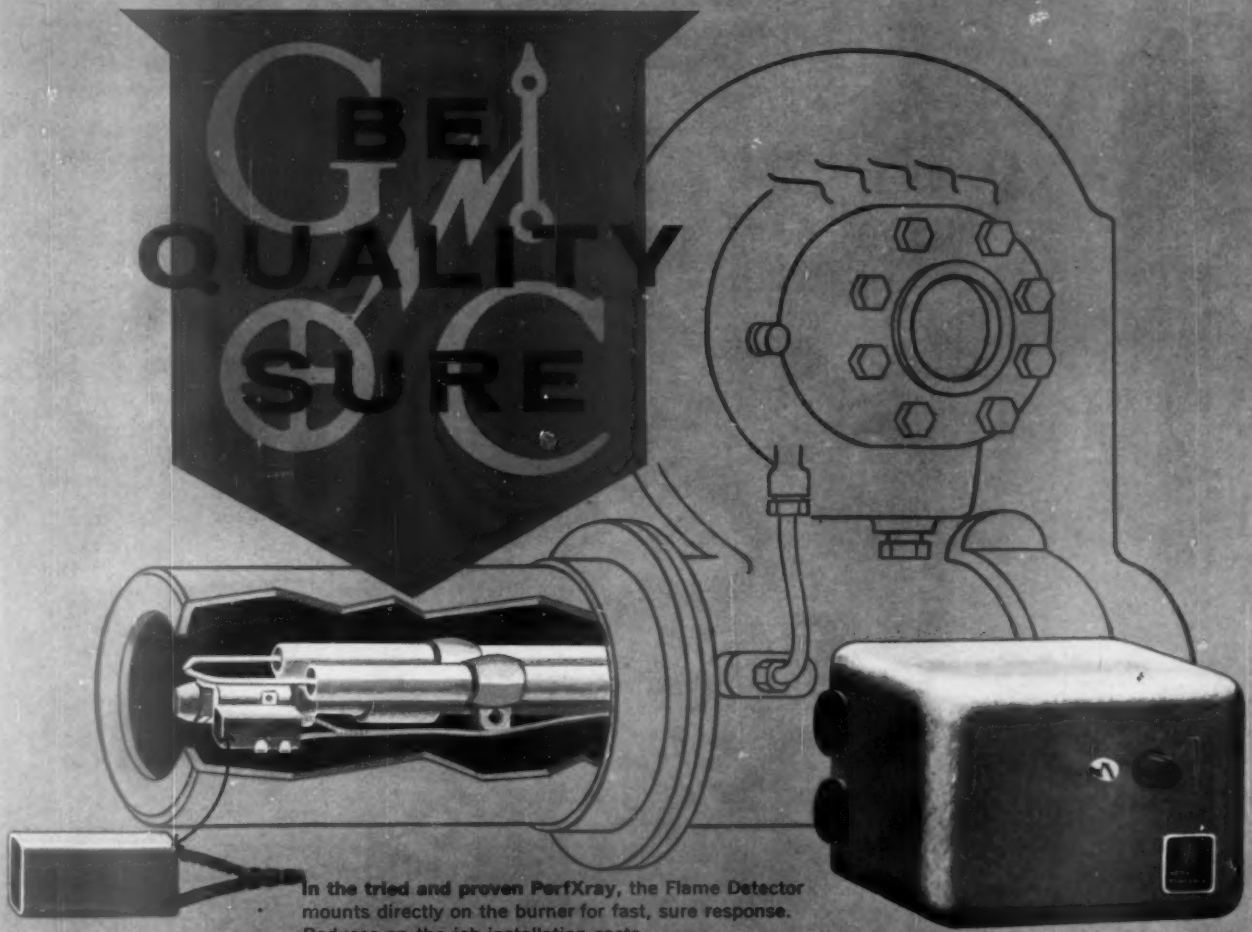
BE QUALITY SURE... ALWAYS SPECIFY GENERAL CONTROLS

GENERAL CONTROLS

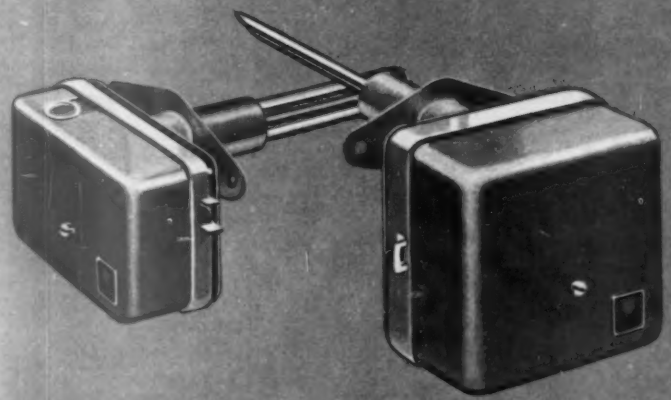
Automatic Controls for Product or Process

Glendale, Calif. • Skokie, Ill. • Guelph, Ontario, Canada

Eight plants—42 factory branch offices serving the U. S., Canada and Western Europe

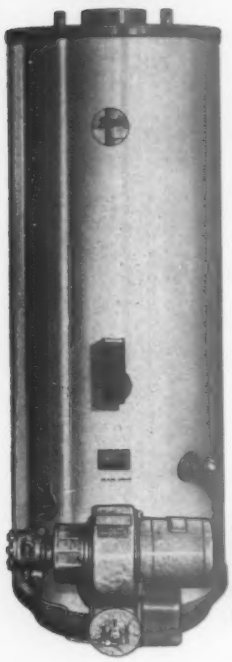


In the tried and proven PerfXray, the Flame Detector mounts directly on the burner for fast, sure response. Reduces on-the-job installation costs.



A full line of stack type oil burner primaries ... constant or intermittent ignition; recycling or non-recycling, plus constant ignition line voltage.

Two-piece oil burner primary with stack mounted sensing element.

Glass Lined
OIL WATER HEATERS

THREE SIZES
30
50
70
GALLONS STORAGE

● A size to meet every requirement. Uses pressure burner, number 2 oil and sells at popular prices. Has every feature for volume sales.
Made in large commercial sizes for schools, hotels, hospitals and public buildings. Approved for 180 degree outlet water.
Details on request.

Bock Corporation
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Holmes heads Jersey Fuel Group; Esso's Ray is principal Speaker

AT THE TWENTY-SEVENTH annual convention of the Fuel Merchants Association of New Jersey, held October 13 to 16 at the Chalfonte-Haddon Hotel, Atlantic City, N. J., A. T. Holmes, Sr., Ridgefield Coal & Supply Co., was elected president, succeeding Merrill H. Thompson.

Also named were: Richard Morgan, Nassau Oil Co., Princeton, 1st vice-president; John Wade, Jr., Fairlie & Wilson Fuel Co., Newark, 2nd vice-president; George Miles, J. T. Evans Co., Riverton, secretary; William Fluhr, Red Bank, treasurer. Hugh Tompkins is managing director of this state-wide fuel association.

Retiring President Thompson opened the convention on Wednesday morning, October 14, and this session was followed by similar meetings during the next two days.

The Future of oil Heat

Principal speaker at the Thursday morning, October 15, session was B. L. Ray, vice-president Esso Standard Oil Co., who discussed the topic, "What's ahead for oil Heat?" He prefaced his remarks with the observation that the heating oil business "has been a good one for many years and will be even more so in the years to come. I am convinced we have a great future."

But, "We should work at developing markets. We must fight to make our future what we want it to be and not what someone else wants it to be." He went on to explain that gas was a difficult competitor, principally because of pricing policies—in the field gas sells for a price which works out to approximately 2½¢ for the same heat value offered in crude oil at 8¢. However, Ray continued, gas may be cheaper at the well in Texas, but oil men have done a much better job of transporting oil, so that gas, in fact, is not cheaper in New Jersey.

Also, gas prices are rising steadily in the field and will continue to rise; new gas transportation facilities are more expensive. And, Ray said, the day probably never will come when gas takes our business solely because of price. Our real battle, he declared, is on two other fronts: equipment and service.

Ray revealed details of an Esso program to improve oilheating performance in the field aimed at assuring homeowners that their oilburners operate at top efficiency. Esso is offering to convert inefficient systems at cost and guarantee savings in fuel.

Field conversion Techniques

The program was decided upon after "extensive research to determine what was needed to produce efficient burner operation." Based on the study, "we developed techniques for field conversions of inefficient installations to efficient ones."

When its own sales divisions and independent distributors have had time to get their programs started, Ray said that Esso will make the results of its research available to the industry. He pointed out that many of the burners tested in the survey were off about 20% due to poor combustion and the improvement possible in efficiency "actually adds about 2 or 3 cents per gallon to the value of the heating oil."

"All who wish to use oil heat must be provided the low-cost equipment that will do an efficient job," he said. "This should be our number one target for the future." However, Ray pointed out, it's well to remember that even new oilheating equipment will not do a good job if oversize burners, fireboxes, boilers or furnaces are installed. "Oversize units are not efficient. A properly designed installation is not only far more efficient than one that is too large, but is also cheaper to install."

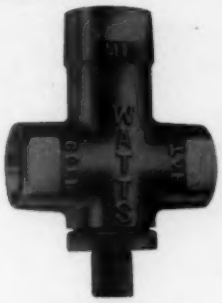
Ray urged support of industry efforts to develop new uses for fueloil, along with greater emphasis on prompt and efficient service, both in maintaining equipment and in automatic, realiable fuel deliveries.

In conclusion Ray outlined a five-

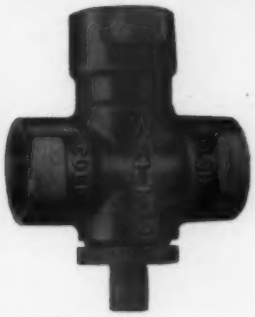
Now... a complete line of dependable low-cost water tempering valves

No. 70 ½″
Sweat Connections

No. 70T ½″
Threaded Connections



No. 70 ¾″
Sweat Connections



No. 70T ¾″
Threaded Connections

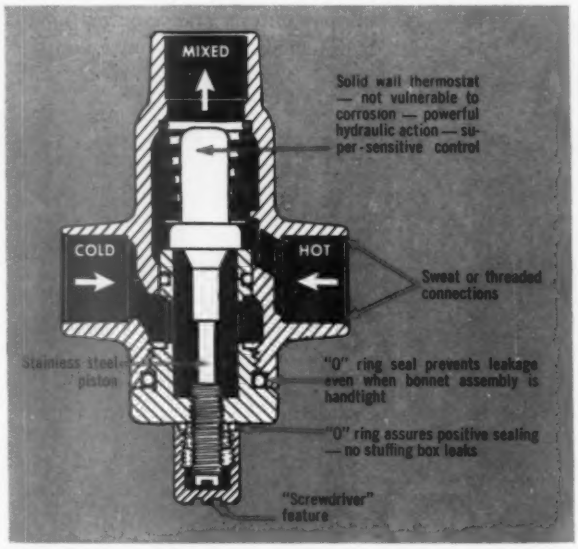
You can meet all installation requirements with the new Watts Series 70 Tempering Valves. It's the broadest line available today — ½″ and ¾″ sizes, with sweat or threaded connections.

The hydraulically operated thermostat is extremely sensitive to temperature changes. Its thermostatic force is so powerful that it positively shuts off cold water completely when there is an excessive demand for hot water, thus delivering full rated capacity.

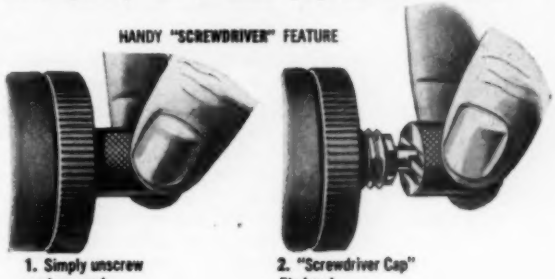
Flow variations have limited effect on the built-in accuracy of this unique design, assuring constant temperatures at all fixtures. These valves have unusually high capacity for their size.

Maintenance is simple. The thermostatic assembly is easily removed and replaceable as a unit. The internal design is clean and simple and can't stick. Valve bodies are of red bronze (85% copper content) — construction that is recognized and required to resist all corrosive domestic hot water conditions. No. 70 furnished in ½″ and ¾″ sizes with sweat connections. No. 70T available in ½″ and ¾″ threaded connections. Adjustable from 120° to 160°F. (Also inquire about the new 1″ and 1½″ No. 170 Tempering Valves, soon to be introduced.)

For **accurately** delivered tempered water . . . for **complete** customer satisfaction with price and service, specify one of these popular size valves.

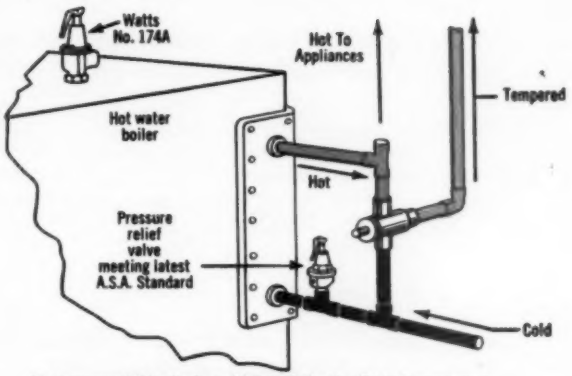

MIXED
Solid wall thermostat — not vulnerable to corrosion — powerful hydraulic action — super-sensitive control
COLD
HOT
Sweat or threaded connections
Stainless steel piston
"O" ring seal prevents leakage even when bonnet assembly is handtight
"O" ring assures positive sealing — no stuffing box leaks
"Screwdriver" feature

HANDY "SCREWDRIVER" FEATURE



1. Simply unscrew seal cap and loosen check nut

2. "Screwdriver Cap" fits head of adjusting screw



We recommend this simple, quick installation to eliminate unnecessary labor and fittings. Position of valve permits easy, visual adjustment.

Be sure ... Use

WATTS

Protection and Control Specialties

Watts Regulator Company, Lawrence, Mass.

THIS NEW LOW-COST FUEL USE COMPUTER

**cuts your oil delivery costs—
eliminates degree day calculating**

There's no complicated calculating needed with the new low-cost *direct-reading* Fuel Use Computer. You're able to tell at a glance the amount of fuel consumed each day by your customers—able to schedule your deliveries to get more profitable use out of your trucks.

How does the Fuel Use Computer work? The rugged, easily installed roof-top measuring unit *continuously* relays the weather around you right to the compact recording unit on your desk. All you do is glance at the direct reading dials for the average fuel use at any time. The recorded "weather units" are displayed on four easy to read registers which indicate fuel oil use for customers who combine house and hot water heating as well as for those who heat house only. What could be simpler?

Just Check These Cost-Cutting Features

- Far Less Clerical Work—And You Use Your Present Card System
- No More Run-Outs—More Use Out of Your Trucks
- Easy to Read—You read "weather units" right off the dials
- Simple to Install—And Maintenance-free
- Safe—low voltage roof units

For more information on how you can cut your oil delivery costs with the new Fuel Use Computer, write today.

1996

HRB SINGER **HRB-SINGER, INC.**

90 Schureman Street New Brunswick, New Jersey

A Subsidiary of The Singer Manufacturing Company

point program to improve oil's competitive position:

1. Make sure that present customers have the equipment to obtain clean, efficient heat.
2. Engineer new installations for low installation cost and maximum heat efficiency.
3. Provide customers with the best service to maintain equipment, plus reliable fuel deliveries.
4. Close our ranks and support industry projects to develop new concepts of equipment.
5. Aggressively support equipment that will provide new and expanded uses for fueloil.

Ray's final statement was a strong expression of confidence about the future of oil heat. He pointed out that heating oil consumption in the United States had doubled in the last decade, a growth rate of nearly 7% a year, and predicted, "The next decade rather than the past will be the greatest in our history."

The Swami tells all

Continuing a look into the future, Ray Nathan concluded the August 15 morning session telling the assembled fuel dealers, "There's a Fortune in your Future." He appeared in his now famous Swami costume and delivered a practical, hard-hitting talk highlighting the sound, aggressive merchandising concepts that will insure the sale of oilheating equipment.

His theme developed the importance of attitude, selling and association. Attitude, he said, includes management's outlook about the company, the employee and the customer, summed up with the advice to install the best business operation possible; "invest in your business to create an impression of success and confidence."

Selling is almost self-explanatory, but Nathan made the point: "To leave the growth of your business to people not interested in fuel sales is to invite the gas company to seduce away your customers." Thus, it is a necessity for the fueloil distributor to provide the equipment his customers need and the service that the equipment might require.

The third point, association, Nathan explained refers to the many bene-

Carry only 4 Purolator filter refills for 98% of all filter replacements

And now is the time to protect every oil burner with a Purolator filter . . . protect yourself from emergency calls this winter

The fact that 4 Purolator Oil Burner filter refills take care of 98% of your oil burner installations is exactly half the story. There's also this: *now* is the time to check the filter on every burner you service. Why? Because dirt is being drawn towards the nozzle as furnaces start up these cool nights —and dirt-clogged nozzles account for most of your burner failures. You stop all dirt particles as small as .0005 of an inch with a Purolator filter. It actually has 5 times the dirt retention and flow capacity of the biggest competitive units. Give them that kind of protection now (it lasts at least a year without servicing) and this winter you'll be free from many of the usual annoying emergency calls.

One more thing: a simple cross reference chart has been worked out by Purolator that shows you which refills will fit all popular makes of filters. It's yours for the asking—and the coupon below makes it easy to ask, right now.

Filtration For Every Known Fluid

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PRODUCTS, INC.

RAHWAY, NEW JERSEY AND TORONTO, ONTARIO, CANADA

TO: PUROLATOR PRODUCTS, INC.
RAHWAY, N. J.

Please send me your oil burner filter cross reference chart.

*Name*_____

*Title*_____

*Company*_____

*Street*_____

*City*_____ *Zone*____ *State*_____

fuel oil & oil heat

I've hit my earning stride.

de ...with my EXCLUSIVE

SUNHEAT FRANCHISE

"Once upon a time, I wasn't doing so hot. But let's forget about that. You're more interested in finding out why I'm riding so high now.

"The answer's easy. I'm a SUNHEAT distributor.

"It seems to me you can't go wrong when you've got all this working for you:

"Take the name Sunoco, for one thing. Everybody knows it. The Sunoco people have made sure of that with steady advertising. They've got a multimillion-dollar program going at full speed right now. It sure helps a lot, from my own experience, in selling SUNHEAT.

"SUNHEAT even supplies me with my own individual advertising program. Puts up half the cost of running it, too.

"But let's get down to SUNHEAT itself. I know it's tops. The Sunheat people tell me that it's a specially made formula . . . many different oils blended into a perfect heating fuel. It really boosts sales.

"From what I've told you, it sounds like the only thing you'd have to worry about would be other SUNHEAT distributors. But that's taken care of, too. My territory's my own—all mine for growth and profits. No tricks, no minimum gallonage either.

"What's more, Sun Oil helps you protect your profit margin.

"All in all, this SUNHEAT set-up is a darn good one. Maybe you'd like it too."

Exclusive territorial distributorships are available now in most marketing areas. Write today for information.

SUNHEAT

FUEL OIL DEPARTMENT

SUN OIL COMPANY

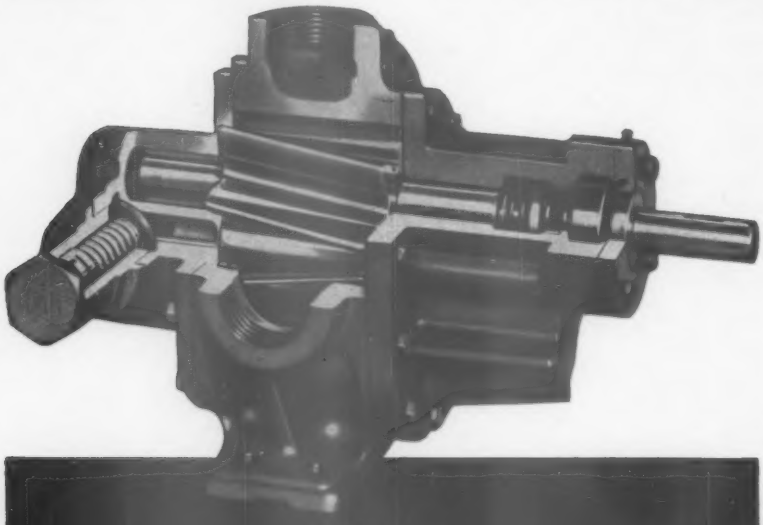
Philadelphia 3, Pa.

ORIGINATORS OF CUSTOM-BLENDED BLUE SUNOCO GASOLINES

SPECIFY

ROPER

ROTARY PUMPS



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TANK TRUCKS
TRANSPORTS
BULK TRANSFER

40-300 GPM • PRESSURE TO 100 PSI

Furnished in hi- and lo-drive design — 40-300 GPM sizes, pressures to 100 PSI. A rotary unit, with accurately machined alloy iron gears . . . heavy duty bronze bearings . . . hardened steel drive shaft . . . with mechanical seal — (packed box, if desired). Adjustable relief valve is standard. Bulk plant units on bedplate, with or ready to receive motor, are also made by Roper.

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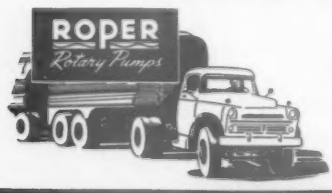


ROPER HYDRAULICS, INC.
Dept. 771 P. O. Box 269
Commerce, Georgia

fits that come from active participation in local or regional oil heat associations. He said that "the only man who can teach you something about your business is your competitor—a fellow association member." Also, participation in association affairs, among a variety of advantages, makes available to members advertising and promotion on a professional basis and, in many areas, the benefits that come from being part of a National Fueloil Council advertising program, under which the Council matches dollar for dollar the advertising fund raised by the local group.

The August 15 afternoon session was devoted principally to topics of interest to fueloil distributors. Harry Fuge, HRB-Singer Co., opened with a discussion of "Degree-days, data Processing and Computing."

He emphasized that measurement of degree-days based on the mean—or median, which he used as a more accurate term—temperature for a 24-hour period was misleading. A better method would be to calculate the average on the basis of a number of readings taken at short intervals during a 24-hour period.

However, neither of these methods takes into account the effect of sun, wind, snow or rain and Fuge demonstrated how these affect the consumption of fueloil. In addition, cloudy days reduce the amount of radiation a house absorbs and increase heat loss.

Thus, temperature alone is not enough to determine the amount of fuel each customer uses. The solution is to determine accurately effective heat loss, which is done with an instrument that considers all the factors, including temperature. The resulting totals, which are automatically recorded, Fuge described as weather units, rather than degree-days. The device becomes an instrument that measures heat loss and accurately indicates fueloil requirements.

T. R. Loizeaux, Sr., moderated a panel discussion on incentive plans during the same session.

Arthur J. DeBlois, Jr., Pawtucket, R. I., outlined the plan his company has had in effect for about a year. His fueloil truck drivers are guaranteed a minimum of 50 hours a week and

NEPTUNE PETROLEUM METERS

Complete Truck Metering System in One Weight and Space Saving Unit

Nothing extra to buy...only 3 connections to make

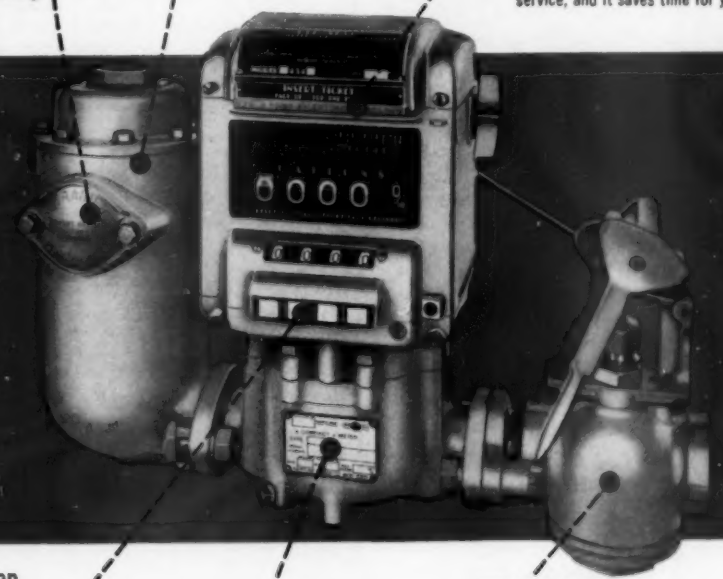
Only Nepture gives you *all* these features in so little space, with so little weight. Everything's built into one compact unit...a complete metering system. Most Neptunes can be assembled with right-hand, left-hand or angle flow, so they pack neatly into any position in the compartment.

Neptune meters permit more pay-load...with no "extras" or accessories to buy...less chance for leaks...less chance for improper installation.

Add Neptune's fine reputation for sustained accuracy and you have the big reasons why this Neptune meter is the oil marketer's most sought-after business friend.

All sizes. Ask your Neptune Equipment Jobber or Tank Truck Manufacturer for details.

Look what's built into your NEPTUNE...



STRAINER:
Removes sediment, scale and dirt from liquid, averting stoppages and preventing undue wear or damage to meter. Easy access for cleaning.

AIR RELEASE:
This patented Neptune design removes air that may be entrained or sucked into liquid before it enters the meter. High efficiency is absolutely necessary for accuracy.

PRINT-O-METER:
Automatically provides a meter-printed receipt showing number of gallons delivered. Customers appreciate this proof of honest service, and it saves time for you.

AUTO-STOP QUANTITY CONTROL:
Operator sets register for any desired quantity by pushing these buttons. Tripping device actuates Auto-Stop Valve automatically when pre-set gallonage is delivered.

MEASURING CHAMBER:
Positive displacement type. Only one moving element. Measures liquid by volume. Most widely preferred for sustained accuracy and long life.

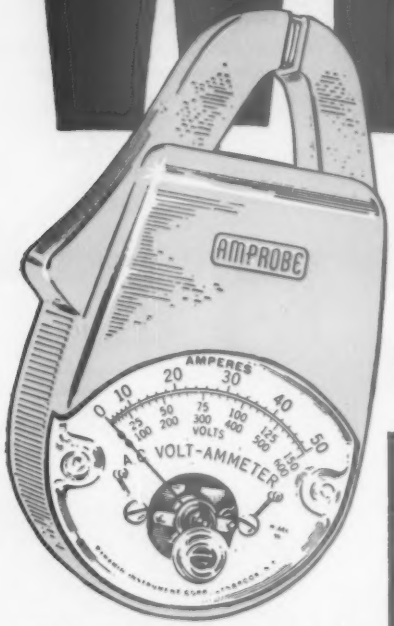
AUTO-STOP VALVE:
Automatically shuts off flow when correct quantity has been delivered. Actuated by tripping mechanism in Auto-Stop register. Avoids spillage and overmeasure. Double-trip valves on larger meters shut off high flow smoothly, quietly, with high accuracy.

NEPTUNE METER COMPANY **neptune** 19 West 50th St., New York 20

for a better measure of profit

BRANCHES AND JOBBERS IN ALL PRINCIPAL AMERICAN CITIES

WHY settle for an ordinary voltage tester?



Ask yourself these questions	The AMPROBE Junior	ordinary voltage tester
Does it measure current as well as voltage?	YES	NO
Does it give you full visibility on a graduated reading scale?	YES	NO
Does it fit conveniently in your pocket?	YES	YES
Does it measure within ±3% accuracy?	YES	NO
Does it come in a full line of models to meet different problems?	YES	NO
Does it protect you against shorts and shocks?	YES	YES
Does it balance loads, locate grounds, determine motor overloads, check rating of circuit breakers?	YES	NO

The AMPROBE Jr. gives you so much more... not just a run-of-the-mill voltage tester but a precision-made instrument that measures voltage *and* current instantly and accurately without shutting down equipment. All this with one rugged and inexpensive pocket-size tool! And now...FOR THE FIRST TIME...at the request of utilities, industrial plants and other large-scale users of AMPROBES, the AMPROBE Jr. has gone SAFETY YELLOW to conform with standard safety practices.

PICK THE AMPROBE *YOU* NEED! There's an Amprobe for every job, every budget: from 10 amps and 250 volts to 1200 amps and 600 volts AC; from $19.85 to $67.50. And with the Amprobe RS-3, you get a volt-amp-*ohmmeter* all in one pocket-sized, snap-around precision instrument. Every Amprobe comes with test leads; most with top grain cowhide leather case at no extra cost. See the complete Amprobe line at your jobber's today.

Amprobe Jr.®
snap-around volt-amp tester
$19.85

PYRAMID INSTRUMENT CORP., Lynbrook, New York

earn points for deliveries of total gallons of product. Each driver's time is figured on the basis of straight time and then on the basis of volume delivered. The driver gets paid the higher of the two amounts. Almost always this is the salary based on gallonage figures.

Success of the plan, DeBlois pointed out, is reflected in last heating season's record of delivering 30% more fuel-oil with three less men and trucks, all at an increased labor cost of only $450.

The second panelist, J. Fletcher Creamer, Fort Lee, N. J., described his company's program of encouraging employees to build volume. In the course of developing the plan, Creamer's company ran weekly contests and rewarded employees for sales of accessory oilheating equipment.

In general the plan encourages servicemen to sell to customers on service contracts accessory equipment that is not covered by the contract. This might include such items as filters, low water cut-offs and similar items that would not be covered on normal service.

Creamer pointed to one benefit achieved. His company is obtaining increased revenue from the sale of accessory equipment and at the same time he has detected a drop in the number of service calls.

On the last day, topics discussed included the advisability of fuel dealers selling central airconditioning. This was a presentation by Buddy Garrison, Stewart-Warner Corp. Also, Irving Oelbaum, Liberty Oil Co., Newark, and vice-president, Oil Heat Council of New Jersey, described the public relations work the Council is performing.

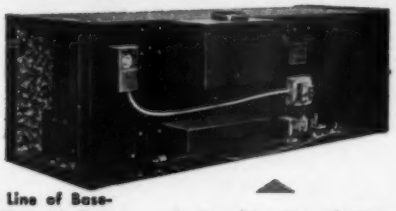
Some 30 companies set up exhibit booths to display their oilheating and fueloil handling equipment, as another facet of convention activities.

❖

Charles Herrin has been named sales manager, two-way radio products, Motorola Communications & Electronics, Inc., for the ten state Western area. His office will be in Burlingame, Calif. Herrin has been with Motorola for the past six years.

Why Settle For "Average"..

Superiority Costs No More WITH MONCRIEF



A Complete Line of Basement Type Winter Air Conditioners — Designed to Burn either Gas or Oil — Available as Assembled and Wired Oil Units.

A Complete Line of Horizontal Furnaces — Gas Fired and Oil Fired — Low and Slender for Limited Spaces — Built for Add-On Cooling.

A Complete Line of Upflow Winter Air Conditioners — Gas Fired and Oil Fired — Compact in Design and Substantial in Construction — Adaptable for Basement Installation — Adaptable for Cooling — Approved for Close Clearances.

Counterflow Winter Air Conditioners — Gas Fired and Oil Fired — Heavily Constructed — Compactly Designed — Close Clearance Approved.

• Are you really satisfied with the furnaces and air conditioning units you are now installing — quality-wise, price-wise, profit-wise?

If your answer is "about average", Moncrief offers advantages which are well above average — and for which you pay nothing extra.

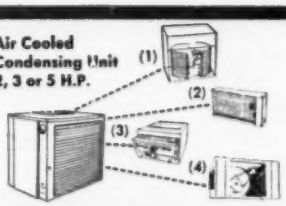
For more than 60 years, Moncrief has manufactured superior furnaces and air conditioning units that have delivered extra satisfaction to dealers, to jobbers and to hundreds of thousands of home owners.

Today's Moncrief line carries forward this tradition of excellence with the same astute design, rugged construction and service-free performance in modern units which are compactly packaged for time-saving installations.

But today's Moncrief prices are the most competitive ever, made possible by ever-increasing sales and the resulting cost-saving production efficiencies.

If you want superior furnaces and air conditioning units at really competitive prices, call your Moncrief Wholesaler **now!**

Combination Year 'Round Air Conditioner — Gas or Oil Fired — Air or Water Cooled

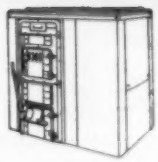


(1) Round Plenum-Type Evaporator Coil
(2) Duct-Type Evaporator Coil
(3) Counterflow Evaporator Coil
(4) Air-Handling Blower-Coil Unit

Gas Conversion Burner 3 Models

Gas Unit Heater 5 Models

Gravity Furnace Gas, Oil or Coal



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HEATING AND AIR CONDITIONING UNITS — MONCRIEF SINCE 1895 — FURNACE PIPE AND FITTINGS

THE HENRY FURNACE CO. • MEDINA, OHIO

fuel oil & oilheat

EVER-TITE

210

your best buy

for high pressure deliveries

Dash-pot feature assures better control under extreme pressures — less shock after delivery

•

Seals of dual poppets are gasoline and oil resistant

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Vacuum breaker feature available

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Aluminum body, bronze parts

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Rigid or flexible tubes

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All parts are completely interchangeable with parts of other "210" nozzles on the market

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Order now from your Ever-Tite distributor, or write for details

EVER-TITE COUPLING CO. INC.
254 West 54th Street
New York 19, N.Y.

Speakers and Programs announced for St. Louis warm air Convention

SPEAKERS and programs for the 1959 convention of the National Warm Air Heating and Air Conditioning Association have been announced. The meeting takes place at the Chase-Park Plaza Hotels, St. Louis on December 2, 3 and 4. Chairman of the convention is Charles H. Franke, Sr., an Association trustee and president, American Furnace Co., St. Louis.

Highlight of the Thursday morning session, December 3, will be a documentary report on the Silver Shield program and a discussion on electric heating by two authorities on the subject. In general, the convention will focus on the theme, "a year of extraordinary accomplishments."

The Association's Board of Trustees, Councils and committees will hold their meetings on November 30, December 1 and the morning of December 2. Then official convention business gets under way on Wednesday afternoon, December 2, with the formal call to order by President Tom Byrd, Lau Blower Co., Dayton, Ohio.

Wednesday afternoon, December 2

This open session will report on activities as follows:

Association accomplishments during 1959, presented by Tom Byrd; the nominating committee will present new officers for election.

Research activities and findings during the past year, summarized by Keith T. Davis, chairman, Research Advisory Council, and Edward J. Brown, head of the group's Research Staff, University of Illinois.

Educational activities and accomplishments, including the impact of new instruction materials, Silver Shield training and college short courses, covered by Prof. Lorin G. Miller, chairman, Application Engineering Council.

Marketing impact and activities, topic of a report by Robert V. Main, chairman, Marketing Council.

Thursday morning, December 3

Presiding will be Joseph J. Decker, first vice-president of the Association. Subjects to be considered are:

Documentary report on the Silver Shield program, analyzing the development of the program as it now operates, plus an evaluation of the effectiveness of Silver Shield dealer training.

Electric heating, with John Norris, president, Lennox Industries, presenting the viewpoint of ducted air heating and cooling. Edwin O. George, Detroit Edison Co., will describe plans and attitudes of the electric industry with respect to electric heating.

Thursday afternoon, December 3

Separate sessions are planned, one of which will deal with topics of specific interest to manufacturers and wholesalers. A simultaneous meeting will center around subjects of interest to dealers.

The manufacturers' session will hear about:

Residential construction forecasts by Dr. George Cline Smith, F. W. Dodge Corp.;

Money market trends, credits and availability by Carl T. Arlt, Federal Reserve Bank of St. Louis;

Taxation laws and their effect on business by Curtis C. Williams, the Association's general counsel;

Labor legislation by the Hon. William H. Ayers, United States Congressman from Ohio.

Theme of the dealer session, taking place at the same time, will be "How to obtain competent sales Personnel. Specific subjects scheduled for discussion are:

Recruiting new salesmen, by a representative of Trundle Consultants, Inc., Cleveland business management specialists;

Training new salesmen by Newt T. Hess, Vorys Bros., Inc., Columbus, Ohio, and a member of the Dealer Training Committee of the Association's Marketing Council;

Compensating new salesmen by Ray Horan, Janitrol Heating and Air Conditioning Div., Surface Combustion Corp., Columbus, Ohio.

(*Please turn to page* 32)

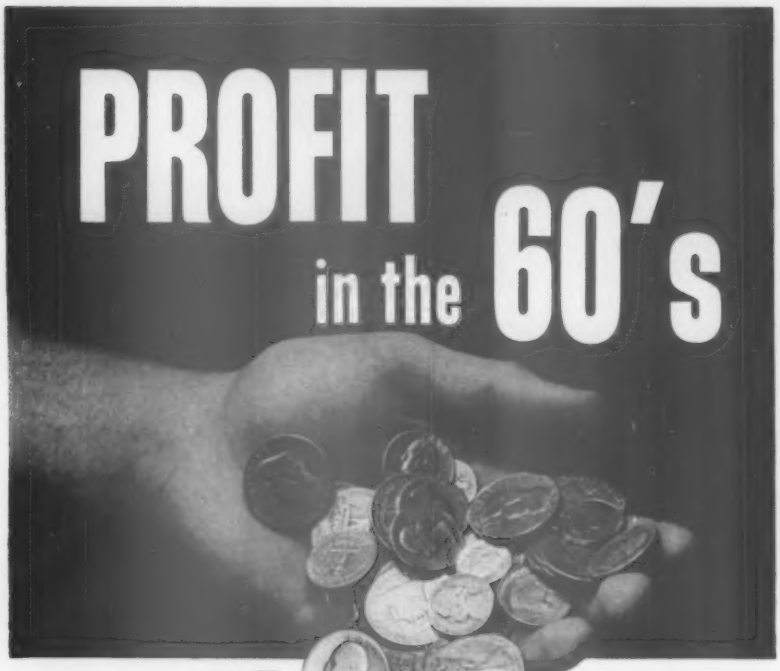
More of what it takes . . . that's what Mobilheat has! More customer satisfaction built into it! More progressive . . . and aggressive . . . selling power behind it! And for the final proof . . . more *customers!*
If you want to build your business around the fuel oil that leads the field in every way, call your Mobilheat representative . . . and talk business!

Mobil

Mobilheat... *America's most popular fuel oil brand*

MOBIL OIL COMPANY—A Division of Socony Mobil Oil Company, Inc.

fueloil & oilheat



with YORK-HEAT

Proved Products — York-Heat oil-fired boilers and furnaces have for more than 40 years been regarded as the highest quality products for automatic heating.

New Products — Now York-Heat engineers have developed new *gas-fired boilers and furnaces skillfully designed* for market needs, priced competitively, and styled for the 60's.

Old Friends — York-Heat equipment has for years been used by the nation's largest builders. These men buy quality products—products that will deliver years of trouble free operation for the buyers of their homes.

New Friends — York-Heat's distributing organization is growing rapidly, but good protected territories remain available for distributors and dealers who are interested in profitable business in the 60's.

Write today for details.

YORK HEAT

YORK-SHIPLEY, inc.

Pioneer and Specialists in Automatic Heat

Boilers to 600 Hp.
Furnaces to 5 Million B.t.u.h.

YORK, PENNSYLVANIA

Friday morning, December 4

J. P. Field, chairman, Dealer Training Committee, will preside at this session, which will explore "How to prepare for profitable Sales." Speakers and their topics are:

How to make the preliminary survey by Mechanical Engineer Gary J. Baker, assistant director of technical services of the Association;

Preparation of cost estimates by William L. Dulle, E. E. Souther Iron Co., St. Louis;

How to sell the quality system by Mr. Field.

Friday afternoon, December 4

This final session will include discussions on application engineering of the system by Herbert T. Gilkey, director of the Association's technical services. Other speakers also will be scheduled.

After presentation of subjects at all sessions, the meetings will be open for discussion and floor opinion.

Boeddener retires, Martin is Manager of warm air Group

JAMES M. MARTIN on November 1 succeeded George Boeddener as managing director, National Warm Air Heating and Air Conditioning Association. Boeddener, who has managed the Association's affairs for nearly 20 years is retiring.

Martin for the past three years has served as assistant managing director and assistant secretary-treasurer. He has been with the group for ten years. Also for the past several years Martin has been responsible for Washington contacts with government agencies and military establishments.

He is 41 years old, married and the father of three children. He is a Kent State University graduate and took

Boeddener

Martin

If you design, specify, install

or service heating equipment

you will find these technical

brochures on the control of draft

an important aid.

May we send you copies?

Handbook and
Installation Guide

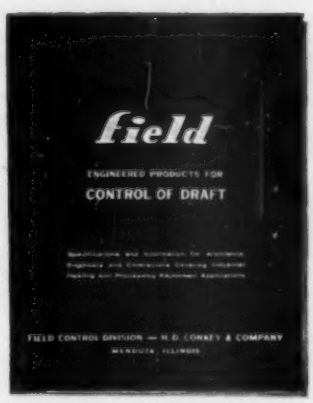
FIELD CONTROL DIVISION

H. D. Conkey & Company — Mendota, Illinois

AFFILIATES

Conco Building Products, Inc. — Brick, Tile, Stone
Conco Materials Handling Division — Cranes, Hoists
Spartan Tool Division — Sewer Cleaning Equipment

Specification Guide

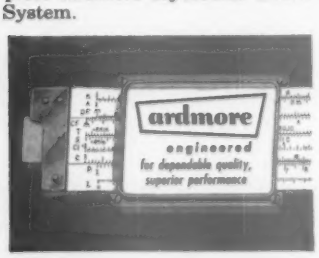


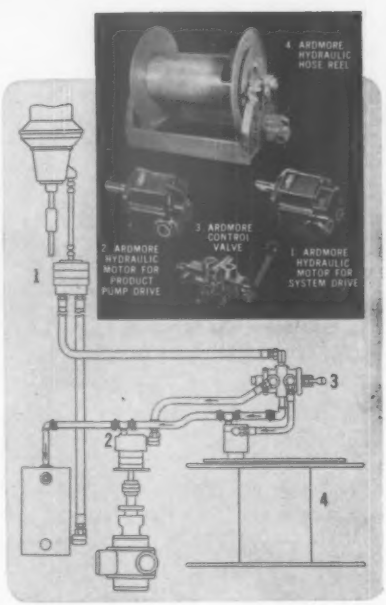
faster delivery, less maintenance, greater safety
when you equip your delivery trucks with
ardmore
HYDRAULIC DRIVE SYSTEMS
in any capacity for product delivery

■ It's a proved fact that an Ardmore Hydraulic Drive System for product pump and hose reel drive lowers your operating costs and increases your profits. For any product pump, delivered gallonage per minute is greater, more deliveries are made per day. There is less wear on truck engine and transmission since the Ardmore system operates under relatively low pressure . . . and at zero pressure by-pass when not under load. The Ardmore system itself is virtually maintenance free because it is inherently self-lubricating. Combined with hydraulic hose reel drive you obtain overall maximum safety in product handling. Installation is far easier than with mechanical drives since connections are made with flexible hydraulic hose. Systems are also easily transferred from old to new chassis.

ARDMORE IS A PATENTED SYSTEM

The Ardmore design is exclusive under U.S. Patent No. 2,816,767. Only Ardmore can give you Ardmore performance features. For Ardmore exclusive advantages, be sure you have a complete Ardmore Hydraulic Drive System.





GUARANTEED FOR PERFORMANCE!

Ardmore Hydraulic Drive Systems are 100% guaranteed for performance as specified . . . PROVIDING the system contains all Ardmore components. There's an Ardmore system for every delivery need for fuel oil, diesel fuel, aviation gasoline and related liquids. Your inquiry is cordially invited.

ARDMORE PRODUCTS

1831 Shermer Road • Northbrook, Illinois
Eastern Office: 612 Commerce Road, Linden, N.J.
International Sales and Service

graduate studies at Columbia University in advertising, sales promotion and business administration. In addition, Martin completed the training course in association management sponsored by the American Society of Association Executives.

Boeddener, retiring after nearly two decades of service as managing director and secretary-treasurer has been responsible for increasing the recognition, membership and activities of the Association "nearly beyond measurement," Tom Byrd, Lau Blower Co. and Association president, said. During his tenure the combined membership of dealer-contractors, wholesalers and manufacturers has increased from 150 in 1940 to 3,000 today; in dollars Association activities have risen from a $20,000 budget to an operation exceeding one-quarter of a million dollars annually.

President Byrd in accepting the retirement commented:

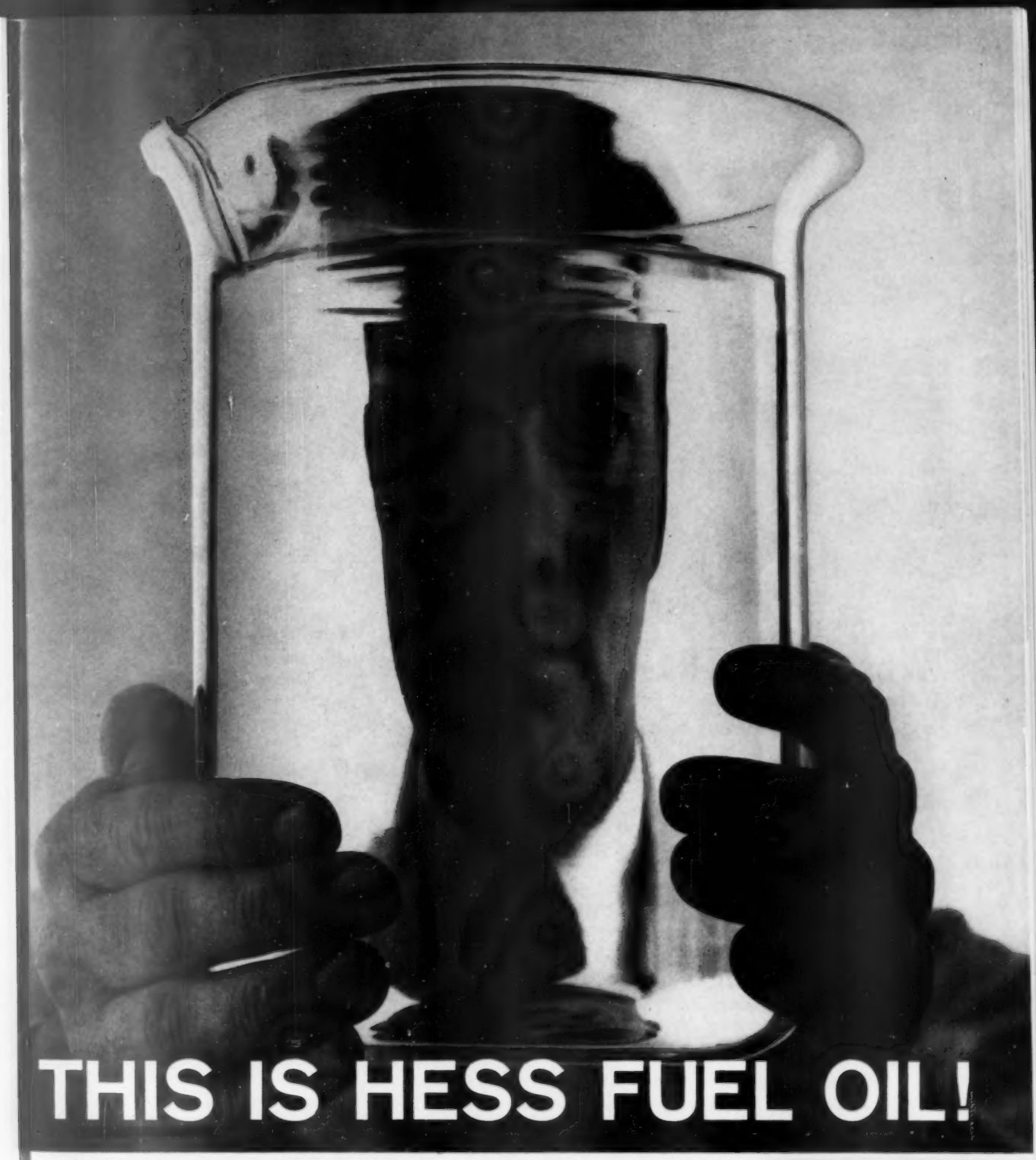
"George Boeddener has rendered an invaluable service to both the Association and the industry. Through personal courage, hard work and continuing enthusiasm he won the support of the majority of the industry's leaders. The administrative staff which he has assembled and trained has been inspired with this same courage and enthusiasm. As he enters into his well-earned retirement, we can anticipate that the staff will continue to build well on the firm foundation which he so diligently established."

Magnolia Petroleum merged with Socony Mobil Oil Co.

MAGNOLIA PETROLEUM CO. has been merged with Socony Mobil Oil Co., Inc., as a part of the over-all reorganization of Socony Mobil.

This is the first step in a coast-to-coast coordination which will result in Mobil Oil Co. assuming direct responsibility for operations carried on by Magnolia, Dallas, Texas; General Petroleum Corp., Los Angeles; and Mobil Producing Co., Billings, Mont. Mobil Oil is the operating division for the United States and Canada.

General Petroleum and Mobil Producing will be merged about January 1, 1960.



THIS IS HESS FUEL OIL!

PLATINUMIZED WHITE-HEAT—THE NEW HESS HOME HEATING OIL!

Clear! Clean! Platinumized-pure! With less sulphur . . . less carbon . . . and absolutely no additives to clog filters, nozzles and oil lines. Quality-controlled to burn better . . . burn cleaner. Uncracked, straight-run WHITE-HEAT means more satisfied customers, less service calls, more profits for you! So get the full story from your Hess representative. Service benefits that are unique in the industry. And now—from the Hess refinery—product superiority with . . .

NEW PLATINUMIZED WHITE-HEAT—THE BRAND TO BUILD YOUR NAME ON!

Hess, Inc. State St., Perth Amboy, N. J. • phone VAlley 6-1000

TERMINALS: PERTH AMBOY, N. J.* • WOODBRIDGE, N. J.* • EDGEWATER, N. J. • PORT READING, N. J.* • PENNSAUKEN, N. J.* • NEW HAVEN, CONN. • ALSEN, N. Y. • RENSSELAER, N. Y.* • ROCHESTER, N. Y. • SCRANTON, PA.* • BALTIMORE, MD.* • HESS FUEL OILS, INC.: JACKSONVILLE, FLA. • PORT EVERGLADES, FLA. • HESS TERMINAL CORP.: HOUSTON, TEX. • NEW ORLEANS, LA.

*WHITE-HEAT Terminals

WEBSTER TRANSFORMERS*

Fit over 200 oil burner models

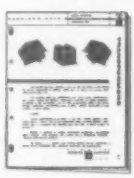
Now it's easy to get the right transformer with the exact base to meet your needs... because each Webster is available with a choice of bases to match the burners in your particular territory. More than one hundred various base styles are available . . . makes Webster transformers easier to handle and service.

Your wholesaler is prepared to supply you with any combination of transformer and base you require. In addition, new terminal adapters simplify hookup with a minimum of parts — requires less time and labor.

You can depend on Webster transformers in every way — to satisfy your customers with quicker starts, for longer, more dependable service. Install them every time!

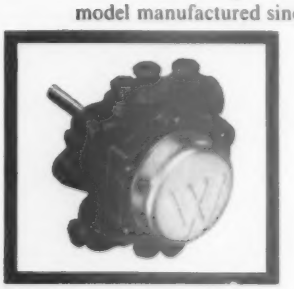
REPLACE WITH WEBSTER . . . IT PAYS!

Webster ServiceSavers, too, are easier and more convenient to handle and service. Now available in the handy Universal Replacement Packages (one contains two single stage and the other, two 2-stage) replaces over 140 fuel units in current use. See your wholesaler.



TIME-SAVING, MONEY-SAVING REPLACEMENT DATA!

Webster Bulletin IT-2 contains comprehensive, up-to-date replacement charts on ignition transformers for nearly every burner model manufactured since 1947. *Write for your free copy — today!*



HEATING DIVISION
WEBSTER ELECTRIC
RACINE · WIS
our 50th year

franklin adv. A-127

60% Reservations received for OHI Exposition Space

BY THE MIDDLE of October reservations already had been received by Oil-Heat Institute of America for 60% of the exhibit space at the 23d National Oil Heat & Air Conditioning Exposition, which will take place April 4 to 7, 1960 in the New York Coliseum.

With the show still five months off, all indications point to a complete sell-out, according to Ralph Becker, Institute managing director. Firms interested in available space should contact Becker at OHI headquarters, 500—5th Ave., New York 36, N. Y.

R. S. Doherty, A. W. Cash Valve Mfg. Co., Decatur, Ill., is chairman of the Exposition Committee and Everett Elliott, C. L. Elliott Co., Danvers, Mass., is chairman of the annual convention of the Institute which is to be held concurrently at the Park Sheraton Hotel, New York.

Preliminary details of the convention program will be published as soon as they are available, along with expected information on special tours and trips to be arranged to permit attendance by dealers from out of town. These plans will be all-inclusive to include transportation, hotel accommodations and similar expenses.

As of mid-October the companies listed below had reserved booth space at the Exposition. It's interesting to note that the list includes six major oil companies, namely, Esso, Gulf, Mobil, Shell, Sinclair and Sun.

Exhibitors, so far

The entire list of exhibitors thus far represents almost 90 companies which have reserved better than 100 spaces.

Aldrich Co.; American Artisan, American-Standard Corp. (Plumbing and Heating and Airconditioning Divisions), American Tube Products, Bell & Gossett, Bryant, Burnham Corp., Cash Valve, Cleveland Controls, Columbia Boiler, Combustion Controls, Commercial Filters, Crane Co., Delavan, Delco Appliance, Dole Valve, Eckhart, Eddington, Edwards Eng., Electrol, Emerson Electric, Empire Chemical, Esso.

Also, Field Control, FUELOIL & OIL

HERE'S WHERE WHITE-RODGERS PERFORMANCE PAYS OFF

...in fewer callbacks and surer profits

"When I put a White-Rodgers fan and limit control on a job, they're in to stay. I know there won't be any expensive callbacks to cut into my profits. For over 20 years I've seen these controls perform where it counts . . . on the job, so I don't ever worry.

"Now, White-Rodgers offers a fan and limit control to fit *any* job I have. They're interchangeable mounting-wise with other makes . . . go on in minutes and last for years.

"On any equipment, new or old, I always insure my profits *completely*. . . by using nothing but White-Rodgers fan and limit controls. You should, too."

Get all the facts. Write today for brochure R-1630.

Hydraulic-Action

CUSTOMline ACE

CUSTOMline DEUCE

WHITE-RODGERS

CONTROLS FOR HEATING • AIR CONDITIONING • REFRIGERATION • APPLIANCES

ST. LOUIS 6, MISSOURI TORONTO 8, CANADA

223

fuel oil & oil heat

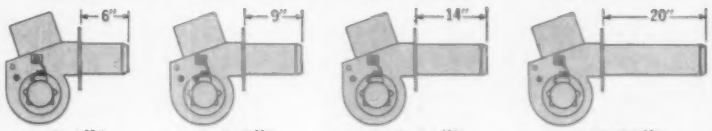
BELIEVE IT OR NOT!

an "8 in 1" OIL BURNER

★ The only burner in the world approved by all U.S.A. testing agencies for firing from .65 gph to 2.50 gph without any component changes except the nozzle. Thus a single burner will satisfy 95% of the installations encountered by the average dealer each year.

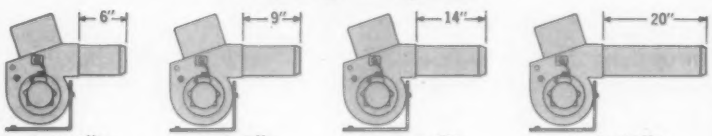
★ The only burner in the world which is convertible in the field to give dealers the equivalent of eight different burners. Thus, in a matter of minutes, you can convert a Rexoil A-2 into the following special-purpose burners.

Flange Mounting on New Boilers, Furnaces, and Water Heaters



A-2-6"F A-2-9"F A-2-14"F A-2-20"F

Pedestal Mounting for Replacing Obsolete Burners and Converting Existing Units



A-2-6"P A-2-9"P A-2-14"P A-2-20"P

★ The only burner in the world designed to give you "8-in-1" interchangeability on a minimum investment. Trade price of this complete Kit is only 15.9% of the amount you would have to invest in all 8 burners needed for the applications shown above.

Show this advertisement to your local Wholesale jobber today!

With each 8-in-1 Kit you get:

A-2-9"P Burner and Control Set
6" Tube and Electrode Assembly
14" Tube and Electrode Assembly
20" Tube and Electrode Assembly
Universal Cast Iron Flange

Each Rexoil installation automatically "sells" your next job!

REIF **Rexoil** INC.
Telephone WAshington 2420
37 CARROLL STREET
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HEAT, Fuel Oil News, G-E Appliance Control Dept., General Controls, Gilbert & Barker, Gorman-Rupp, Gulf Oil, Hago Products, Heat-Timer, Industrial Combustion, Iron Fireman, Johns-Manville, Johnson Degree Day, Johnson Fil-Quik, S. T. Johnson.

Also, Lake Chemical, Lincoln Air Control Products, Manville Boiler, Master Plumber, McDonnell-Miller, Metalmaster, Minneapolis-Honeywell, Mobil, Monarch, Monroe Calculating, Morse-Smith-Morse, Motorola, Oil Equipment Mfg. Co., C. A. Olsen, Penn Controls, Plastic Appliance Co., Pullman, Purolator.

Also, Quality Specialty, Radiant Utilities, Ray Oil Burner, Richmond Plumbing, Scully Signal, Skuttle, Shell Oil, Silent Automatic Products, Sinclair Oil, H. R. B. Singer, Slant-Fin, S.O.S. Products, H. B. Smith, Sun Oil, Spartan Convector, Spencer Boiler, Steinen, Stewart-Hall, Stewart-Warner, Sundstrand Hydraulic, Sun-Ray Burner.

And, Taco, Time Saving Fills, V & E Products, Walker Mfg. & Sales, Wm. Wallace, Watts Regulator, Webster Electric, Weil-McLain, Westinghouse, White-Rodgers.

Building Research Institute plans Washington Meeting

FROM NOVEMBER 17 to 19, the Building Research Institute will sponsor a conference at the Shoreham Hotel, Washington, D. C. Some 50 speakers, 80 to 90 workshop participants and more than 30 panel discussion members will take part in the program.

New heating techniques will be the topic for the all-day meeting on Tuesday, November 17, under the chairmanship of John Everetts, Jr. Speakers and their subjects are as follows:

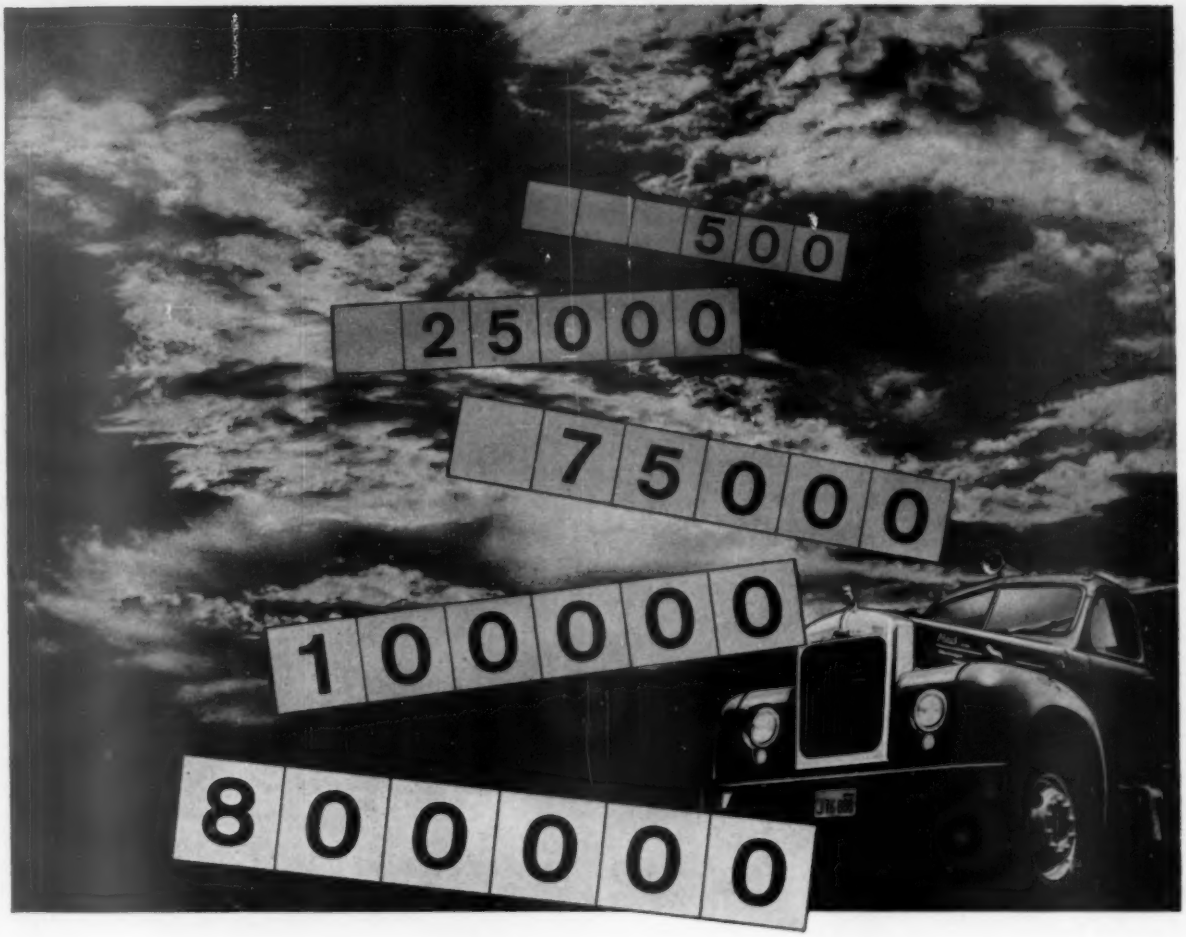
Walter A. Friend, Ebasco Services, Inc., "Energy and Fuels for new heating Systems";

Herbert T. Gilkey, National Warm Air Heating & Air Conditioning Association, "New air heating Methods";

Harold A. Lockhart, Bell & Gossett Co., "New Hydronic Systems";

J. Raymond Carroll, University of Illinois, "Radiant Systems for Heating";

Frank H. Faust, General Electric



How to keep your Macks in like-new condition

It's easy to keep Macks up to their original matchless efficiency. You simply maintain Mack's exclusive Balanced Design . . . in which every major Mack component is made—by Mack itself—to work in unison with every other part.

How do you maintain Balanced Design? Insist on genuine Mack parts! They're only a local call away—at your nearby Mack distributor or factory branch.

Sure, other parts may "fit the hole". But only genuine Mack parts are designed and tested by Mack engineers to perform like the original units . . . or perhaps better than an older original part . . . since Mack components are continually being improved.

Remember. You operate the world's best trucks when you own Macks. Keep them that way with the world's best parts . . . *made by Mack . . . made for Macks.* Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd., Toronto, Ont.

7040

MACK
FIRST NAME FOR
TRUCKS

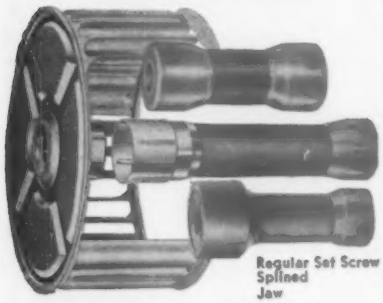
Look for these signs on highways everywhere. They're your assurance that Mack Parts and Mack Service are available wherever your Macks go.

fuel oil & oilheat

QUALITY is our business .. without *any* compromise

***AND ONLY* Guardian GIVES YOU ALL THREE —**

1. FLEXIBLE COUPLINGS



Regular Set Screw
Splined
Jaw

Only Guardian gives you these features—

- **ROLL SPINNING**—Exclusive process joins all three components at one time—while in final operating alignment.
- **BRAIDED RUBBER**—Ground to absolute true concentricity. Furnished in BUNA-N TUBE and NEOPRENE COVER. Lateral and angular alignment requirements fully met.
- **ONE-PIECE DESIGN**—Minimizes assembly and handling costs. Made to exact lengths required.

Over 5,000,000 Guardian couplings are on original equipment. This is your assurance of highest quality and universal acceptance in the field.

2. OIL TANK VALVES

No. 1910 B

Check These Superior Guardian Features—

- Metal-to-metal seating.
- Highest quality machined bar stock.
- Greater wall and body strength.
- Fusible linkage available in all designs.
- Valve designs for every type of installation.

3. QUIK JOINT

Steel compression fittings for connecting steel pipe.

Patent No. 2,685,460

- Eliminates threading of pipe.
- Decreases cathodic corrosion and electrolysis.
- Guaranteed for pressure up to 2000 P.S.I.
- Allows 7° angular deflection.
- U.L. approved for oil and gas.

Write for free descriptive literature.

Guardian PRODUCTS CORP.
COUPLING DIVISION

Dept. F-119 1215 East Second Street
MICHIGAN CITY, INDIANA

Co., "New Electric heating Systems": and

R. C. Jordan, University of Minnesota, "The Future of solar heating Systems."

There will be a discussion period moderated by John Everetts during which the program speakers will explore the heating research needs.

The Building Research Institute, a unit of the National Academy of Sciences-National Research Council, is a private, non-profit organization with members from all segments of the building industry. Copies of the full program and registration information for the Fall Conference may be obtained by writing to Milton C. Coon, Jr., executive director, Building Research Institute, 2101 Constitution Ave., Washington 25, D. C.

Crescent Parts holds Fall service School

IN WHAT WAS described as the largest dealer service meeting ever held by a service station in the Midwest, three hundred dealer guests and Crescent staff members attended a Fall service school, held by Crescent Parts and Equipment Co., St. Louis.

The school took place at Carpenter's Hall on September 24. A feature of the presentation was a lecture on the Webster fuel unit and delayed-action valve by Lou Ehrich, Webster Electric Co., Racine, Wis.

The school is part of a continuing educational effort by Clarence Bartling, Crescent president, and George and Cosmo Gludici, his partners. The intent is to provide authoritative and up-to-date burner service information to Crescent's St. Louis area oilheating customers.

Besides the Webster Service Station operation, Crescent has a large jobber business, furnishing oilheating accessories and supplies to dealers in a wide area centered around their St. Louis and East St. Louis stores.

Controls Company sells Milwaukee Valve Company

LOUIS PUTZE, president, Controls Co. of America, Schiller Park, Ill., has announced the sale of Milwaukee Valve Co., a subsidiary, to a group of Chicago investors.

Controls Co. decided to dispose of the business and certain assets of Milwaukee Valve, Putze said, in order to devote its efforts to its major interest, the controls industry. Milwaukee Valve, a 58-year-old manufacturer of brass and aluminum valves, was purchased by A-P Controls in 1953 and became a subsidiary of Controls Co. when A-P Controls merged with Soreng Products in 1956.

Milwaukee Valve Co., Inc. will continue as the corporate name, with Herschel Seder as president and Max Koenigsberg, executive vice-president. Seder formerly was vice-president in charge of sales, Hammond Valve; Koenigsberg was vice-president, Englander Co. Sales and manufacturing activities are to be continued from the firm's main office at 2375 South Burrell, Milwaukee, Wis.

Sun and Wind Effects influence daily Efficiencies

FOR SOME YEARS it has been known that a home needs more oil on a windy day, less on a still sunny day. These considerations are not too important over a period of two or three weeks, but can be mighty important for individual days.

At the winter rush period it's often important to be able to spread out the deliveries, some times as far as a couple of days ahead.

The Minneapolis-Honeywell Co. has done considerable work on these climatic variations. One of their booklets on commercial controls contains a table that shows just how much wind velocity increases fuel need.

Wind Effect on Heat Loss

1. When the outdoor air temperature is:

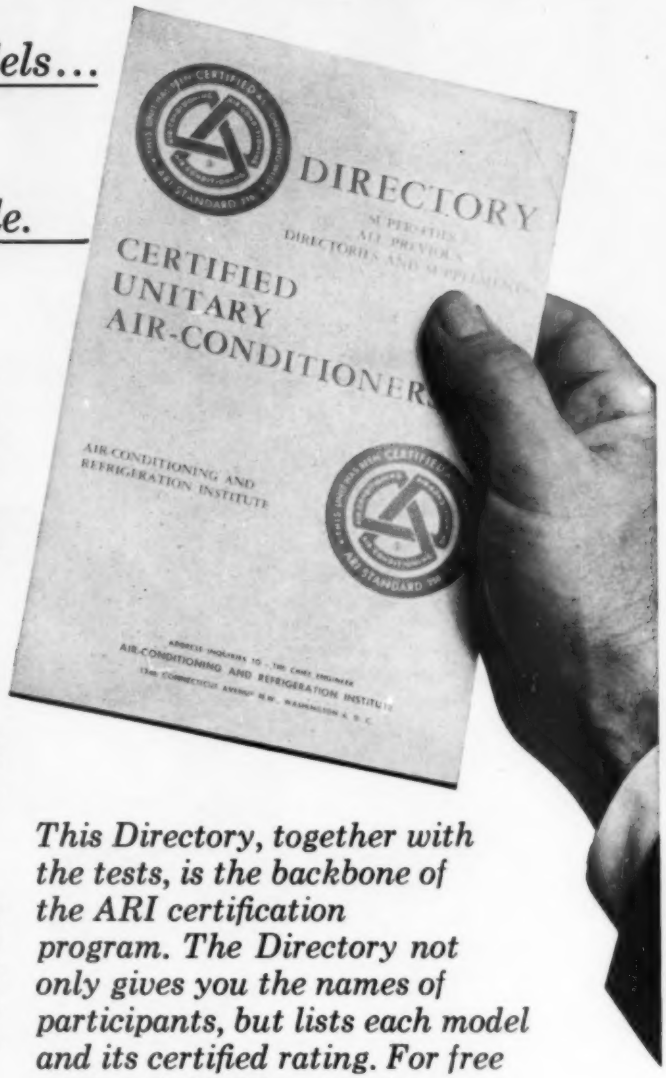
2. And the wind is blowing at the rate of ——— MPH ———

3. The heat loss from a building exposed to wind of the velocities given above is the same as it would be at these outdoor air temperatures (Deg. F.) with no wind:

(Deg. F)	10	20	30	40
40	30	20	10	— 3
30	18	8	— 4	—17
20	8	— 5	—18	—33
10	— 3	—16	—32	—48
0	—14	—29	—46	—63
—10	—26	—40	—60	—76

WHO'S WHO IN UNITARY AIR-CONDITIONING*

Manufacturers...models... certified ratings. New listing now available.



This newest edition of the ARI Directory of Certified Unitary Air-Conditioners lists all participating manufacturers, their models, and certified ratings. It also explains this ARI program, which is specifically designed to help *you*. It provides standard rating capacity and dispels confusion for prospective customers.

The manufacturers (and their models) listed here are "blue bloods" of the industry. However, nothing is accepted merely on face value. Each model of certified unitary equipment must be of proven merit. Briefly, here's how the ARI Certification program works:

ONE: A test unit is selected *at random* from a distributor's stock. Comprehensive and closely-controlled tests are run on this unit for a total actual testing time of 22 hours. These tests determine whether the unit meets its advertised capacity—and other claims.

TWO: If, at any time during the testing, a unit breaks down or does not measure up to specifications, the manufacturer is immediately notified. He then has just 30 days, after final conclusions are reached, in which to revise his production procedures, or his rating, or otherwise bring his equipment up to specifications. If this is not done, the unit must be dropped from production immediately and it is rejected for inclusion in the ARI Seal of Certification program.

This Directory, together with the tests, is the backbone of the ARI certification program. The Directory not only gives you the names of participants, but lists each model and its certified rating. For free copies of the Directory for yourself or your customers, just write to: Chief Engineer, Department E-11, Air-Conditioning and Refrigeration Institute, 1346 Connecticut Ave., NW, Washington 6, D. C.

*"Unitary" air-conditioners: all packaged air-conditioners, whether single units or combined units designed to be used together (called "split" systems), up to 135,000 btuh in capacity, but not including room air-conditioners or heat pumps

fuel oil & oilheat

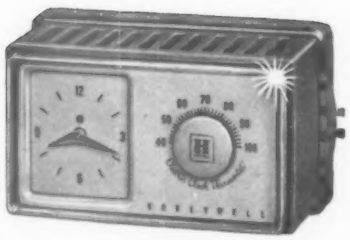
SAV

T832, Day-Nite Round

Thermostat has manual set-back for lower economical temperatures —night or day—and automatic temperature pick-up. Cooling can easily be controlled with this same thermostat by using a reversing relay.

T852, Electric Clock Thermostat

Turns heat down at night, up again in the morning—all automatically. New T861 model with subbase may be substituted on heating-cooling jobs. If add-on cooling is anticipated, install T861 now and add subbase for cooling.



INGS

SAVINGS for you through easier installations, fewer call backs...SAVINGS for your customers through greater fuel economy.

With the T832, a simple turn of the center ring sets it to automatically turn up the heat at any desired hour—day or night. It's a real fuel saver for working couples and for people whose bedtime or waking hours vary.

And there's the T852 Electric Clock Thermostat for people whose bedtime and wakeup hours are consistent. It provides the utmost convenience by automatically turning the heat down at night and up again in the morning.

But whichever model you install, Honeywell Thermostats are *sure* to keep working properly so you're sure to keep your installation profit. And it's only *one* of many ways you profit by handling all-Honeywell matched controls. For when you deal with Honeywell, you're *backed* by Honeywell... backed 100% by the best service in the industry and a complete line of quality products. You get reliability, easier installation, simplified inventories, training school for your crew—*plus* really fast help when you need it. Help that's instantly available from 112 Honeywell sales-service offices as close as your phone.

Specify Honeywell the next time you order thermostats, heating equipment or air conditioning equipment.

For information on Honeywell's complete line of control systems for heating and cooling, call your local Honeywell office, or write: Minneapolis-Honeywell, Dept. FH-11-150, Minneapolis 8, Minnesota. Honeywell sales and service coverage is world wide.

Honeywell

H HONEYWELL First in Control

SOLDER SEAL

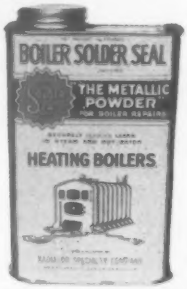
BOILER PRODUCTS

FAVORITES FOR OVER 30 YEARS

Rust Raider Liquid Boiler Cleaner quickly removes and destroys rust and scale. No draining or flushing required. Rust Raider reaches all of the heating system. Insures instant heat at all radiators. Rust Raider preserves metal and prevents further rusting.

Boiler Lax powdered concentrate gives fast, long-lasting results . . . quickly knocks out rust, grease and scale in one operation . . . no draining or flushing. Stops foaming, priming and surging. For new installations . . . one treatment protects parts for an entire season

Quick and easy to use . . . add Liquid Boiler Solder Seal to the water in the heating system as directed on the can. Liquid Boiler Solder Seal quickly forms a rugged bond that restores heating systems to lasting, steady service. Contains no materials that will impede circulation . . . no acids to damage any part of system.



America's leading boiler repair compound. POWDER BOILER SOLDER SEAL, quickly and dependably, seals boiler leaks and forms a rugged bond. Resists the same heat and pressure that the boiler itself will withstand. A quick, sure repair for leaks in steam and hot water systems . . . even repairs leaking pipes and radiators.

AT YOUR P & H WHOLESALER

RADIATOR SPECIALTY COMPANY

CHARLOTTE, NORTH CAROLINA

OUR CATALOGUE LISTS OVER 600 RUBBER AND CHEMICAL PRODUCTS

Ask for your copy today!

Pennsylvania State Law requires printing Meters

A STATE LAW has been approved and signed in Pennsylvania, which reads in part: "All deliveries of light fuel-oil to consumers shall be made by the use of such a meter (capable of furnishing a printed delivery ticket), and a meter printed delivery ticket rendered the customer at the time of delivery or with the invoice."

Originally, the wording of the bill had required that the meter furnish a printed invoice and that it be left with the customer at the time of the delivery. Since a number of dealers have for some time been relieving fueloil truck drivers of the necessity for completing the meter ticket at the time of delivery, the original wording would have prevented the use of postcard billing, or similar methods of mailing invoices to the consumer.

Introduction of the original measure was prompted by the fact that a few months ago the National Conference on Weights and Measures recommended a model law requiring a ticket be left by the driver after each delivery. The Conference merely makes recommendations of this kind, but states and other governing bodies generally follow them.

Prompt and vigorous action by various oilheating organizations in the State, augmented by appeals from organizations outside the State, prompted the Legislature to change the wording. While the bill now makes mandatory the use of printing meters—it was permissive before—the new wording will enable dealers to calculate bills in their offices.

Standard of Indiana builds Terminal on Missouri River

A MARINE TERMINAL on the Missouri River near Jefferson City, Mo., is being built by Standard Oil Co. (Indiana).

Facilities will include a barge unloading dock, four storage tanks and a truck transport loading dock. Two pipelines will transport petroleum products from the unloading dock to the inland facilities. Products will be supplied from the Wood River, Ill., refinery.

this **WALKER SHUR-FLO** Draft Inducer-Regulator *Unit...*

ENDS DRAFT PROBLEMS RIGHT FROM THE START...

MODELS For Gas... Oil... and Solid Fuels!

"I don't fuss and fret with uncertain draft anymore since Walker brought out this low-priced draft inducer-regulator combination. Now, I install Walker inducers on all my jobs. That puts me way out ahead, because with good draft I know every job will be exactly right from the start."

THE INSIDE STORY OF SHUR-FLO EFFICIENCY

- Hi Volume Self-Feathering Fan
- Self-Cleaning Blades (No soot build-up)
- Stainless Steel Shaft, Hub, and Blades
- Quiet, burn-out proof motor
- Silicone oiled Bearings
- Extra heavy gauge galvanized steel construction
- Extra rigid mountings.

"Most Efficient Draft System Ever Made"

Say Heating Contractors, Architects, Home Owners

Draft problems end with Walker Shur-Flo (Pats. Pend.), SUREST DRAFT SYSTEM EVER DEVISED for oil, coal or gas-fired installations from older homes to modern, low-roofed houses. Install it, forget it! What could be better?

Fan-operated draft-inducer draws *only* flue gases — *not* outside air. Quiet. Costs less to operate. Needs little power. Installs quickly at *any* angle. Virtually eliminates costly call-backs, corrections.

For full details, see your supplier or write direct

WALKER MFG. AND SALES CORP.

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Free!

"HOW TO CURE SICK CHIMNEYS"

Now, the *first* ready-reference guide collecting *all* the information on Power Inducer Venting you'll need to solve your draft problems. You'll find it indispensable. Get your handy copy *now!* Absolutely no obligation.

WRITE TO US AT ADDRESS AT LEFT

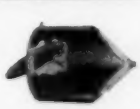
Scientifically Designed Walker Draft Controls for Every Draft Purpose Are Standards of the Industry. 30,000,000 in Use Prove Efficiency.

ROYAL PURPLE for smaller central heating plants

BALANCED 34 for larger, special central heating

JUNIOR LINE central heating budget control

TYPE BB commercial and industrial control



DOUBLE SWING for gas fired equipment

VENTURI CAP for heating and ventilating

fuel oil & oil heat

the nozzle in THE GREEN BOX *is taking the industry by storm*

It's the Delavan Type "W"

Takes the guesswork out of nozzle selection

Dealers everywhere are stocking and installing more and more Delavan Type "W" Nozzles. No need to worry about hollow or solid cone in the small burners (.50 through 1.35 GPH) where performance is most critical. You replace either pattern with the Delavan Type "W". The industry's only all purpose nozzle . . . and remember, Type "W" Nozzles under 1.00 GPH are now furnished with sintered filters at no extra cost.

Improved fires on most jobs

Delavan's exclusive bi-metal construction is another reason for its amazing popularity. Brass body and stainless steel metering parts conduct heat away from the nozzle faster after burner shutdown, reduce clogging varnish and residue build-ups.

Be sure you install the premium nozzle —Delavan Type "W" Nozzles in the green box. Try an assortment today.

Ask your jobber, or write for free literature.

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Manufacturing Company
WORLD'S LARGEST MANUFACTURER OF NOZZLES • WEST DES MOINES • IOWA

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Long Island O.H.I. in huge promotion Rally

THE OIL HEAT INSTITUTE of Long Island held an industry rally at Baldwin, N. Y., on October 14 to show its present and prospective members and supporters how its cooperative advertising campaign has been helping oil-heating sales on the Island.

This group has the second largest of the programs sponsored by the National Fueloil Council, with a 1959 fund of $186,000.

Attending the rally were 540 fuel-

TWO NEW OIL FURNACES

MODEL U-OB

MODEL CF-OB

NEW! UPFLOW MODEL U-OB

60" low x 20"-27" wide x 32½" deep

4 sizes: 84,000–95,000–112,000–140,000 Btuh

This brand-new oil-fired winter air conditioner is shipped completely factory-assembled and wired, with burner installed. Burner and controls are completely enclosed in an attractive cabinet that's so compact you can install it almost anywhere—basement, utility room, game room, hallway, alcove.

The small size is made possible by a new-type sectional heat exchanger that gives more heating surface in less space, extracts maximum heat—and gives *you* a strong fuel-economy sales story. Both the primary control—with flame-sensing device in the burner blast tube—and the fan-and-limit control are factory-connected to a single Central Control Station.

NEW! COUNTERFLOW MODEL CF-OB

65" low x 20"-24" wide x 32½" deep

3 sizes: 84,000–95,000–112,000 Btuh

Here is the best-engineered counterflow unit made today.

For example, a new-type sectional heat exchanger provides maximum radiation surface in minimum space. The new Central Control Station handles *every* operation of the furnace automatically. The new primary safety control is factory-mounted right in the burner blast tube.

"MERCURY-ROUND" THERMOSTAT

Here's big news! This DeLuxe mercury-activated Thermostat is standard equipment on all furnaces *at no extra cost*. As efficient as it is attractive, it anticipates heat requirements — eliminates costly over-heating, and ends that chilly feeling so common before the furnace goes on.

Both the U-OB and the CF-OB are equipped with the proven American-Standard "ACD" burner, which has earned a reputation among dealers as "the most reliable burner on the market." These two units are *all* you need to handle 95% of your oil-fired installations—basement, utility or counterflow. (If you need larger capacity, a two-furnace installation has definite advantages.) Units convert easily to gas . . . cooling is easily added. Get the spec sheets and the low competitive prices at your American-Standard distributor today.

AMERICAN-Standard

AIR CONDITIONING DIVISION

Elyria, Ohio

fuel oil & oilheat

MAKE MORE PROFIT ON EVERY GALLON

DELIVER MORE OIL WITH LESS WORK

BY USING

SPEED-KLEEN

Nozzle tube and fill pipe fittings.

Stop nursing problem fills! Speed-Kleen fittings make all fills easy fills—you deliver oil to whistle vented tanks at any speed you want—up to 100 g.p.m., or more—safely, cleanly, with less effort. Let us prove it and show how easily you may install this work saving, money making equipment without loss of time—simply put it on in place of the present fill cap.

Don't continue losing profits. Write or phone C. G. Eyster at

TIME SAVING FILLS, INC.
Phone York 6119
140 W. Market St., York, Pa.

oil and oilheating men including quite a number from the major oil companies.

Ray Nathan, the group's president, outlined with visual aids many of the helpful activities since the campaign was started in 1955. He was followed by Pat Caputo, the OHILI chairman of the board, and in turn by Douglas Blair, the treasurer, who explained the financial workings with NFC and the real enthusiasm that has grown through the concept of their slogan, "Two for One gets More done."

One part of the program was devoted to a display and explanation of new oilburning equipment types. First was the new Iron Fireman unit, next a furnace by Jet Heat, Inc., that will be on the market this winter, followed by a presentation of the combustion principles inherent in the new Shell oilburning process.

An important announcement disclosed that Robert Barr, secretary of the group for several years, has resigned to become general sales manager of Jet Heat. He will be succeeded as of November 15 by Lester Lukkason, formerly assistant public relations director, National Lead Co., New York.

Philadelphia Fuel Conference names Assistant to Director

JAMES J. ESPENSHADE has been appointed assistant to the director of the Greater Philadelphia Fuel Conference. His duties will include development of the rapidly growing oil heat promotion program of the Conference.

This year, the group's promotion program will use the "Little Bill" concept on bumper strips and window streams. Some 160 streetcars and buses traveling the main routes throughout the city will carry the oilheating message.

Also supplementing this campaign is newspaper advertising throughout the week in the *Inquirer*, *Bulletin* and *Daily News*. On Thursdays, 34 suburban papers carry the "Little Bill" ad. Radio is used too with 10-second spots being carried on four local stations.

Edward E. Esterline is director of the Conference and W. D. Williams is president.

DON'T GUESS—

TEST

HEATING SYSTEMS

with the

VECO ELECTRONIC COMBUSTION ANALYZER!

Accurate Combustion Analysis is Provided Through The Measurement Of:

- CO_2 CONTENT OF FLUE GAS
- STACK TEMPERATURE
- DRAFT OVER FIRE

RUGGED • ACCURATE • FAST

— Direct reading time is less than 10 seconds
— All 3 functions in one instrument
— One meter, one dial with 3-scale readout

The Veco Combustion Analyzer is a portable precision instrument designed for furnace installation and service men to obtain maximum heating efficiency on any type of oil, gas, or coal furnace.

MODEL 140-A—Domestic model, temperature compensated for average ambients $159.50*

MODEL 140-C—Industrial model, accurate at any ambient temperature $179.50*

For complete details write

VECO VICTORY ENGINEERING CORPORATION

124 Springfield Road, Union, N. J.
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*Prices subject to change without notice, in continental U.S.A. and are FOB Union, N. J.

YOU CAN ENJOY MORE PROFIT...

THROUGH ATLANTIC QUALITY, RESEARCH AND SERVICE

Atlantic Heating Oils mean quality because:

- Atlantic's exclusive triple-refining process assures every Atlantic Distributor and his customers top value in clean, modern heat.
- Atlantic's continuous research provides vastly improved products to meet growing public needs.
- Atlantic's proven 89-year reputation for refining skill and marketing know-how.

Atlantic services can produce increased efficiency and more sales because:

- Atlantic maintains a proven Distributor Advisory Committee to help with all phases of heating oil sales and distribution.
- Atlantic offers complete training in all aspects of heating oil marketing.
- Atlantic Operations specialists provide expert assistance and guidance in analyzing and solving specific distributor problems.
- Atlantic's personal estate planning helps provide greater future security.

For complete information about convenient supply points and the advantages of an Atlantic Distributorship, call or write The Atlantic Refining Company at the nearest regional office listed below.

ATLANTIC
HEATING OILS

PROVIDENCE, R. I.
430 Hospital Trust Building

SYRACUSE, N. Y.
120 West Genesee Street

PHILADELPHIA, PA.
260 South Broad Street

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PITTSBURGH, PA.
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CHARLOTTE, N. C.
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THE ATLANTIC REFINING COMPANY • *Producer, Refiner and Marketer of Quality Petroleum Products*

WITH

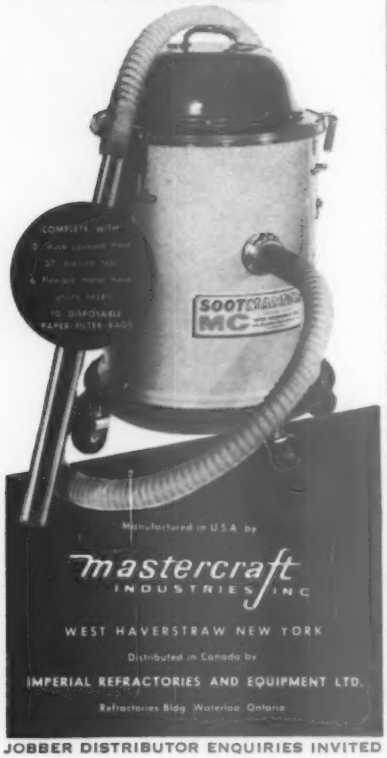
SOOTMASTER

MODEL 581

The engineering principles incorporated in the SOOTMASTER Model 581 feature a larger filter area designed for lasting suction and maximum filtration. These, combined with Mastercraft disposable paper filter bags, provide a double filter action that prevents soot leakage, eliminates costly dust bag failures and insures longer motor life. New power cooling diffused exhaust design eliminates annoying exhaust blast and quietly distributes escaping air in all directions without disturbing the dust accumulation found on boiler room walls and rafters.

Lightweight and three convenient carrying handles make this machine easy to carry and easier to empty with the aid of the Throw-away Bag. The cannister is protected by a new dollie assembly that not only acts as a mount for four swivel casters but also is encased in a rubber bumper that protects walls and objects from being marred. —

LITERATURE ON REQUEST



JOBBER DISTRIBUTOR ENQUIRIES INVITED

Northamerican Wholesalers plan St. Louis Convention

THE CHALLENGE of the 60's will be the theme of the international convention of the Northamerican Heating & Airconditioning Wholesalers Association to be held at the Chase Hotel, St. Louis, Mo., November 29-December 2.

Following committee meetings, the first workshop panel session will discuss the future of electric heat and its effect on heating wholesalers. Among the sub-topics to be treated here are electric heat viewed by the utility, by the oilheating industry, by the furnace manufacturer and by the wholesaler.

Another workshop session will cover principles of modern wholesale management with discussions on the scientific selection of personnel; employee and management development; attitudes among employees; work simplification; and training supervisors.

Gene Flack, Sunshine Biscuit, Inc., and Dr. Neil Bowman are slated to be the speakers at the luncheons.

Tuesday afternoon's session, December 1, has been designed to give wholesalers an opportunity to confer with their manufacturing suppliers.

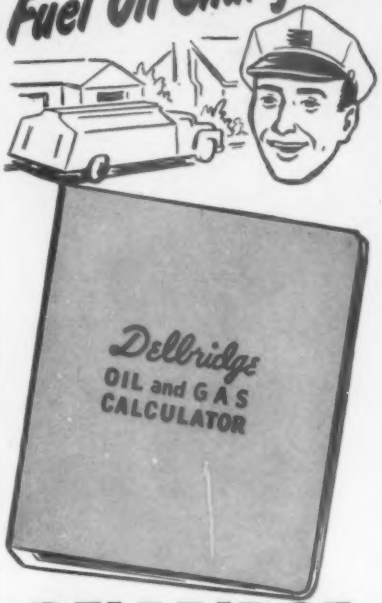
Lee J. Haines is general chairman of the convention, and Clarence F. Ahrens is chairman of the business conference program. Oscar Brauer is president of the association; "Wib" Bull is executive director.

Dutchess County Dealers hold commercial-industrial School

A SCHOOL, sponsored by the Dutchess County (N. Y.) Fuel Oil Dealers Association, is designed for service personnel of organizations concerned with commercial-industrial oilburners. The school, which operates under the Adult Education Division of the Poughkeepsie, N. Y., school system, meets for nine nights, with a different topic studied each night. Fee is $12.

Representatives of manufacturers and major oil companies, plus service managers from local concerns, act as instructors. The current course, which holds its last class on November 2, is the first conducted for heavy oil servicemen, but the association has been running a similar program on light oil service for the past several years.

Fastest, Easiest Way to Figure Fuel Oil Charges!



DELBRIDGE
Oil & Gas Calculator

Stop figuring fuel oil charges the old-fashioned, long-hand way! No more errors—no more dissatisfied customers!

Figure fuel oil charges fast—easily—accurately—with the DELBRIDGE Oil & Gas Calculator! Total amount of sale is *pre-calculated* for you without laborious long-hand figuring and errors—simple as finding a phone number!

Covers prices from 5¢ to 35¢ per gallon by steps of 1/10¢. Shows gallonage from 1 to 250 gallons by steps of 1 gallon—then to 5,000 gallons in easy steps.

Durable, long-lasting leatherette metal-ring binder. Only 5¼" x 6½"—fits easily in coat pocket. Guaranteed accurate by Lloyd's of London. Only $5.00 each.

Try the DELBRIDGE Oil & Gas Calculator for 10 days . . . *without obligation!* Prove to yourself how it can save time . . . cut down costly errors. Mail coupon for FREE 10-day trial. *Send no money!*

FREE TRIAL COUPON!

DELBRIDGE CALCULATING SYSTEMS, INC.
2502 Sutton Ave., St. Louis 17, Missouri

Send the DELBRIDGE Oil & Gas Calculator . . . *without obligation!* We will approve your invoice for $5.00 (plus postage) within 10 days if we decide to keep the Calculator.

Name.....Title.....

Company.....

Address.....

City.....Zone...State.....

Today's smallest two-way mobile radio - actual size!

New General Electric Transistorized Progress Line

General Electric's new Transistorized Progress Line will fit in more places, in more different positions, than any other two-way mobile radio you can buy today.

Not only is this the world's smallest, lightest commercial two-way mobile radio, but standby battery drain is so low you need never turn off your TPL mobile unit, just like the clock in your car. You install no special generator, use less gas, require fewer engine jobs.

TPL is the first two-way radio that transmits up to 75 watts of power in high band . . . the first that really fits under the dash . . . the first to realize the full benefits of transistorized design (no more than four tubes) . . . the first to eliminate bulky cables through new one-piece design of receiver control and transmitter . . . the first with shielded dirt-free ventilation.

The new General Electric TPL ushers in a new era of convenience and reliability in mobile communications. Don't miss all the exciting details. Write General Electric Company, Communication Products Department, Section 40119, Mountain View Road, Lynchburg, Virginia.

GENERAL ELECTRIC

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FOR FASTER FILLING

PHILLY
RAPID-TITE
Fuel Oil Delivery System

. . . you can reduce delivery costs as much as 20%. We'll prove it to you with your equipment at your office. Ask our field service man or send coupon below.

PHILLY'S first for modern fuel oil delivery

- One Nozzle Connector fits all fills.
- One-quarter turn hook-up.
- One Cap and Insert for all fills.
- One "O" ring Seal for Cap and Connector.

PHILLY *RAPID-TITE* DIVISION
PLASTIC AND APPLIANCE CO., INC.
5311 WESTMINSTER AVE. PHILA. 31, PA.

MAIL TODAY

I'd like proof.

Name

CO.

Street

City State

Ed Brown is elected President of North Carolina Oil Jobbers

PRESIDENT of the North Carolina Oil Jobbers Association for the coming year is T. Ed Brown, elected at the recent fall convention at Grove Park Inn, Asheville, N. C.

Also elected were B. E. Maultsby, vice-president; A. J. Carey, vice-president—fueloil; and E. P. Godwin, treasurer. Directors elected for a three year term are Carroll M. Barringer, Robert E. Bryan, Frank T. Erwin, D. Worth Joyner, Titus C. Williamson, R. E. Allison, and E. B. Nichols.

"Oil Heat Unity—how near a Reality?" was the subject of a panel moderated by Fred Burroughs, National Fueloil Council. He explained how the council works and said that it would spend about $2 million in 53 markets.

C. M. Blickensderfer, Sinclair Refining Co., said that the unified oil-heating industry will present a strong front which will attract wide support to promote oil heat as the modern heat in the public mind.

He feels that the industry should not be satisfied with a growth rate of less than 5% and that this growth can be achieved by good organization.

James K. Glenn and Joe Berry backed a mandatory assessment plan that would have the suppliers add the necessary .1¢ to .3¢ per gallon to the invoice to take care of the dealers' share of the promotion program.

The scope of the API sponsored research at Battelle Memorial Institute was outlined by William A. Sullivan, Shell Oil. He stressed that building for the future wasn't enough. Present markets must not be neglected and present customers must be satisfied.

Fitzgerald speaks at Meeting of Union County, N. J., Group

LEROY FITZGERALD, Esso Standard Oil Co., was the speaker at the first fall meeting of the Union County Oil-Heat Association. The group met at the Roselle Golf Club, Roselle, N. J.

As Esso's Jersey division coordinator for the H.E.P. (Heating Efficiency Program), Fitzgerald described this development toward the upgrading of heating equipment.

(*Please turn to page* 118)

for all-star sales performance sell LINCOLN

★ HIGHEST QUALITY
★ FULL FLEXIBILITY
★ HANDSOME PROFITS

Lincoln Hi-Boy (Oil Fired) Available in five sizes from 85,000 to 184,000 Btu. at bonnet.

The full line of Lincoln Oil-Fired Home Winter Air Conditioners offers the dealer an all-star performance from every angle . . . efficiency, economy, good looks, easy installation . . . you name it!

Write for full descriptive literature and get all the reasons why it pays to push the LINCOLN line!

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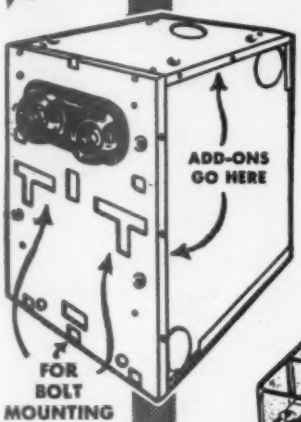
AIR-CONTROL
PRODUCTS, INC.
Manufacturers of Heating and Cooling Equipment
SWARTHMORE, PENNSYLVANIA

STOP CHASING for TRANSFORMERS

SID HARVEY'S — *MAGIC MOUNTING TRANSFORMER*

- **Makes one Transformer an Exact Replacement for 195 Different Oil Burner Models**



EG Body Patent Applied For

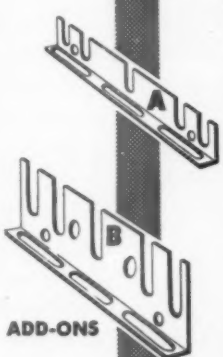
INTERCHANGEABLE TERMINALS

PACKAGE 76
Yes ONE Transformer Body with a handful of "Add-Ons" and interchangeable Hi-tension terminals can be made to fit almost any oil burner that you have to service.

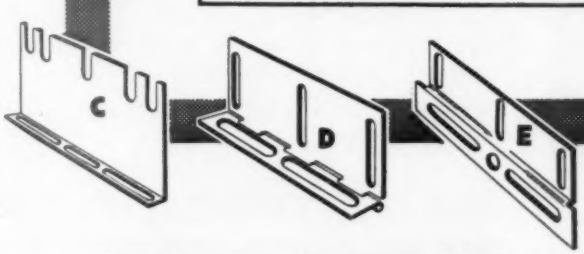
EASILY INSTALLED
A screw driver is all you need to attach the "Add-Ons" and the Terminals. Do it right on the job.

REPLACES
Hinge, Bracket, Bolt or Pedestal mounted. Hi-tension in base or on end. Male, Female, Buss Bar, Plunger or Thumb Nut Terminals Internal Junction Box with knock-outs in base, top or either side.

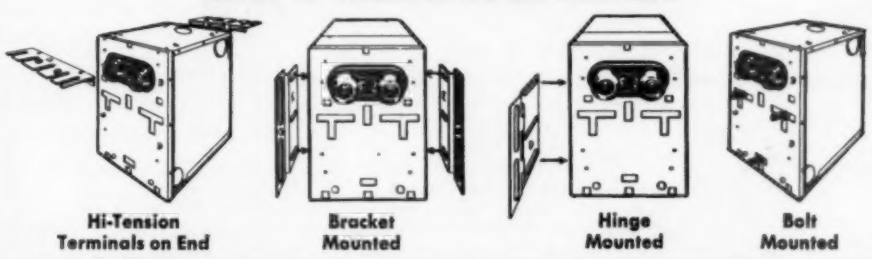
PACKAGE CONTAINS
1 — 10,000 volt. 2 pole Transformer Body
10 — Add-Ons. Two each of A, B, C, D, E,
12 — Interchangeable terminals.
3 — Bolts and Wing Nuts for Bolt mounting.



ADD-ONS



METHOD OF MOUNTING ADD-ONS AND BOLTS



Hi-Tension Terminals on End | Bracket Mounted | Hinge Mounted | Bolt Mounted

A MUST FOR EVERY SERVICE CAR

Trade Price $18.40

SID HARVEY INC.
VALLEY STREAM, NEW YORK

AVAILABLE AT ALL SID HARVEY STORES

fueloil & oilheat

ZONVALVE*

the zone control valve with

100% SHUT OFF

for positive temperature control!

Globe-type construction of Zonvalve guarantees complete shut-off on steam, hot and chilled water systems. This means positive temperature control, without heat waste.

Engineer-architects and heating men recognize the superiority of Zonvalve's design features. Self-aligning plug insures positive closure and eliminates jamming. Valve is powered by a heavy-duty motor, with pinion, gear and cam assembly—for extra-long life and silent, dependable operation. Zonvalve's "hand-size" compactness makes installation possible where space is limited. Zonvalve is the *only* valve that uses Teflon for a self-lubricating, permanent seal.

New color brochure contains layouts, applications, customer benefits, technical data and prices. Write for Brochure B-11.

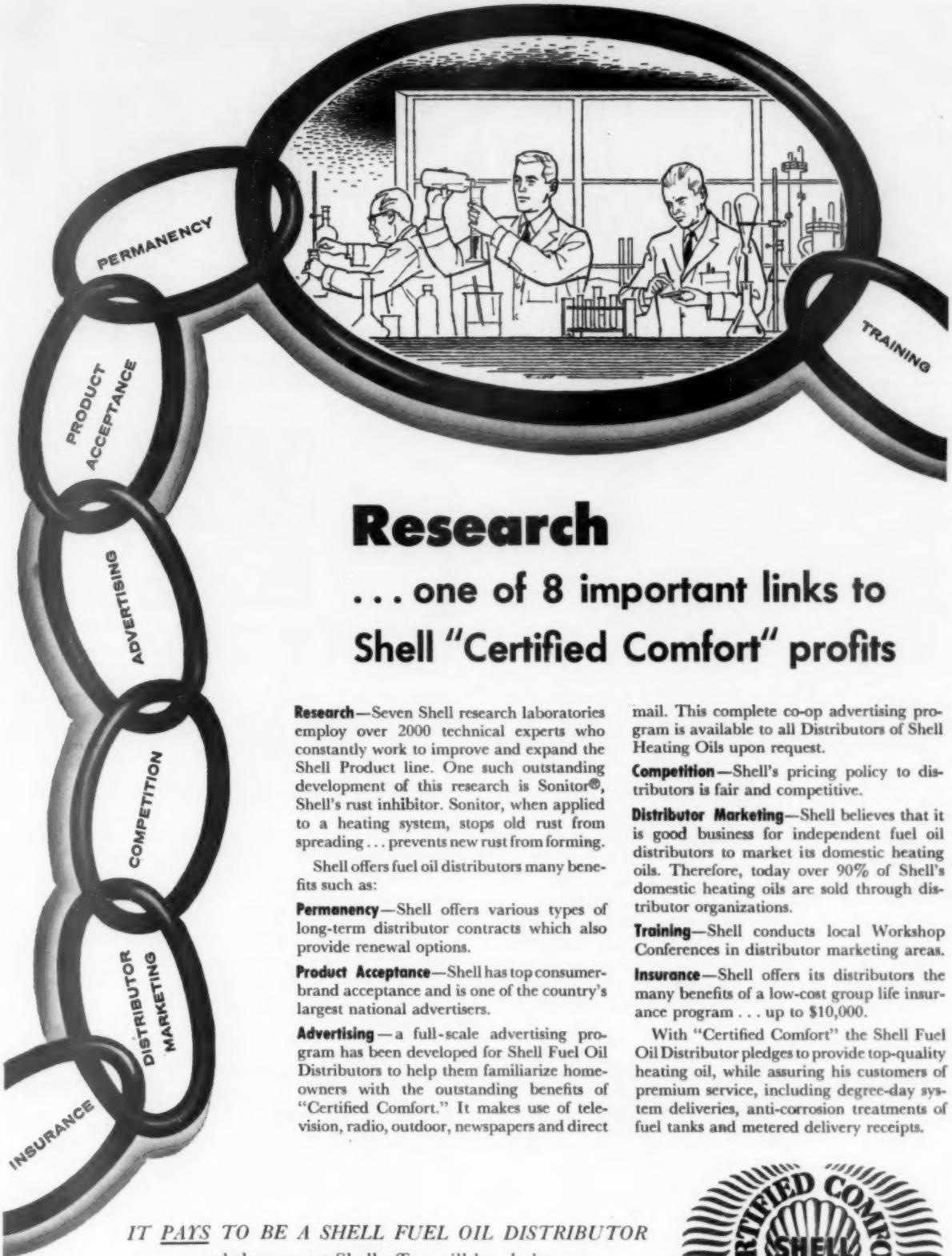
Zonvalve is competitively priced. Built to last a lifetime, *it is the only zone control valve with an unconditional written Five-Year Guarantee!*

Zonvalve is ideal for modernization and new construction, in residential, commercial and industrial zone heating. For the finest in zone control equipment—specify Zonvalve, install Zonvalve!

ZONVALVE

* This Trade-Mark is registered by Heat-Timer Corp., manufacturers of heating controls and motorized valves since 1935. It is your guarantee of positive zone control.

HEAT-TIMER CORP.
657 BROADWAY, NEW YORK 12, N.Y.



Research

. . . one of 8 important links to Shell "Certified Comfort" profits

Research—Seven Shell research laboratories employ over 2000 technical experts who constantly work to improve and expand the Shell Product line. One such outstanding development of this research is Sonitor®, Shell's rust inhibitor. Sonitor, when applied to a heating system, stops old rust from spreading . . . prevents new rust from forming.

Shell offers fuel oil distributors many benefits such as:

Permanency—Shell offers various types of long-term distributor contracts which also provide renewal options.

Product Acceptance—Shell has top consumer-brand acceptance and is one of the country's largest national advertisers.

Advertising—a full-scale advertising program has been developed for Shell Fuel Oil Distributors to help them familiarize homeowners with the outstanding benefits of "Certified Comfort." It makes use of television, radio, outdoor, newspapers and direct mail. This complete co-op advertising program is available to all Distributors of Shell Heating Oils upon request.

Competition—Shell's pricing policy to distributors is fair and competitive.

Distributor Marketing—Shell believes that it is good business for independent fuel oil distributors to market its domestic heating oils. Therefore, today over 90% of Shell's domestic heating oils are sold through distributor organizations.

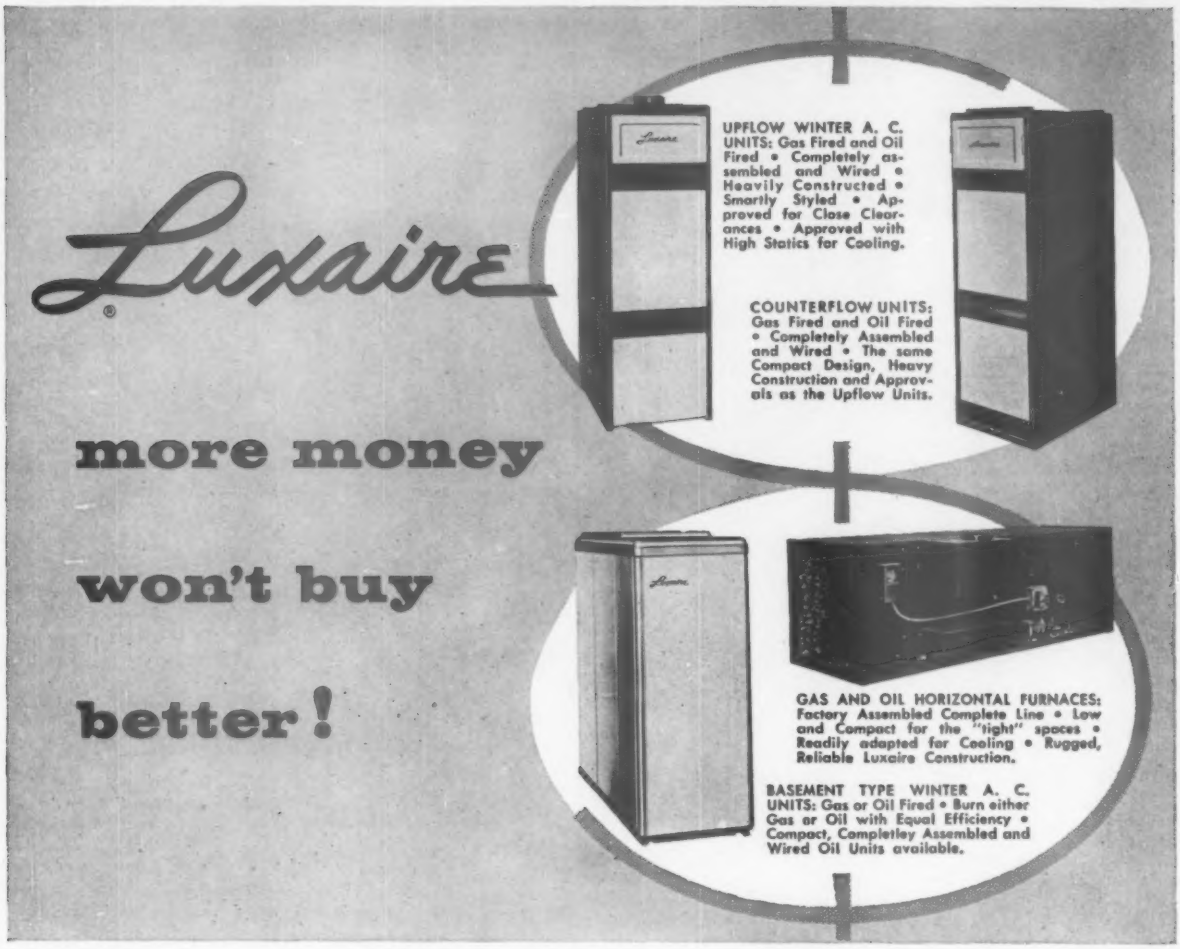
Training—Shell conducts local Workshop Conferences in distributor marketing areas.

Insurance—Shell offers its distributors the many benefits of a low-cost group life insurance program . . . up to $10,000.

With "Certified Comfort" the Shell Fuel Oil Distributor pledges to provide top-quality heating oil, while assuring his customers of premium service, including degree-day system deliveries, anti-corrosion treatments of fuel tanks and metered delivery receipts.

IT PAYS TO BE A SHELL FUEL OIL DISTRIBUTOR
—and the nearest Shell office will be glad to show you why. Ask for the District Manager.

CERTIFIED COMFORT
SHELL
HEATING OILS


Luxaire
more money
won't buy
better!
UPFLOW WINTER A. C. UNITS: Gas Fired and Oil Fired • Completely assembled and Wired • Heavily Constructed • Smartly Styled • Approved for Close Clearances • Approved with High Statics for Cooling.
COUNTERFLOW UNITS: Gas Fired and Oil Fired • Completely Assembled and Wired • The same Compact Design, Heavy Construction and Approvals as the Upflow Units.
GAS AND OIL HORIZONTAL FURNACES: Factory Assembled Complete Line • Low and Compact for the "tight" spaces • Readily adapted for Cooling • Rugged, Reliable Luxaire Construction.
BASEMENT TYPE WINTER A. C. UNITS: Gas or Oil Fired • Burn either Gas or Oil with Equal Efficiency • Compact, Completley Assembled and Wired Oil Units available.

Luxaire...always a Deluxe Unit...always competitive in Price!

Here's a sales builder that will always make you money: *Concentrate on Luxaire!*

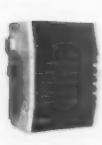
Select any unit from the complete Luxaire line: Gas, Oil or Coal Furnace, Summer Air Conditioner, Gas Unit Heater or Conversion Burner.

It will be uncomplicated in design, heavy in construction, trouble-free in performance and appealing to the eye. It has the qualities to command the top price from your custom-installed and replacement installations. And it has the price that permits you to compete successfully against cheaply constructed units!

Because of Luxaire's manufacturing advancements and volume production, you do not choose between excellence and a low price. For Luxaire gives you *both!*

Nor do you have to carry a large stock in order to enjoy a favorable price. A nearby Luxaire jobber will provide speedy delivery of the unit you need!

See your Luxaire jobber, *today!*



GAS UNIT HEATERS: 5 Sizes

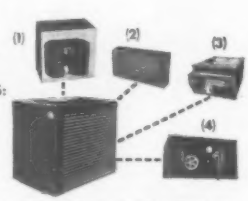
GAS CONVERSION BURNERS

GRAVITY FUNRACES: Gas, Oil and Coal

COAL WINTER A. C. UNITS: 3 Sizes

YEAR 'ROUND A. C. UNITS: 2, 3, 5 H.P. • Air or Water Cooled

ADD-ON SUMMER A. C. UNITS:



2, 3 or 5 H.P. Air Cooled Condensing Unit, and (1) Plenum Cooling Coil, (2) Duct Cooling Coil, (3) Counterflow Coil, (4) Blower-Coil Unit.

THE Luxaire C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

HEATING & AIR CONDITIONING UNITS

fueloil & oilheat

You don't need a Gimmick

Stott of Fox Castle, Pa., finds Success in selling to Builders comes with good Salesmanship

by William J. Stein

THERE IS NO GIMMICK; nor is there any special technique in selling oilheating to a new home builder. It is just a matter of being in enough places at the right time with a relatively competitive product that is supported by services and a customer relations program that will more than offset a difference in price.

This, in a nut shell, is the practice at R. L. Stott & Co., Inc. of Foxchase, Pennsylvania, a suburb of Philadelphia, which results in more than 300 new oil heat installations a year. Members of our industry will recognize this area as one of the toughest places for expansion. Gas lines reach out into almost every road, lane and footpath. Yet, in spite of this, oil accounts are gained daily by this progressive organization. The manner in which this is done is no trade secret. It has been discussed and recognized by all. Yet, not enough dealers have pursued it vigorously in areas where builders have generally gone to gas heat.

Earl Kunkle, the manager of the heating department, explained his basic obstacle in competing with gas installations as one of price. The basic cost to a builder is usually about $75 more for an oil installation. Beyond this, there are the additional costs of electrical kitchen and laundry appliances as compared with the typically less expensive gas appliances. This additional cost raises the spread to as much as $250 between oil heat and gas heat. How then is this overcome?

Gordon Stott, the president of the company, and Earl Kunkle best explained their program as one based on a personal relationship with their builder accounts that has been built up over more than a decade.

Kunkle and one other salesman, Joe Ashenbrenner, are out in the field every single working day. The Stott firm works for approximately 25 builders. These builders put up from five to as many as 50 homes a year. All of these homes are in the suburban areas of Bucks and Montgomery Counties, which are serviced by Stott's fuel trucks. Kunkle noted that he made it a practice to "visit" with each one of these builders once every two weeks, and in many cases, once or more a week. In addition new builder accounts are solicited constantly.

It should be recognized that these builders are not in the mass-production category. They represent the type of builder who constructs homes to a customer's order. With this type of construction the element of cost is not the only criteria, as often is the case with competitive development builders. The personal feelings of the homeowners enter the picture and condition the terms of the sale, thus allowing greater flexibility in the equipment going into the house. It also affords Stott's salesman the opportunity to talk with the customer personally and sell the values of oil heat straight to the user.

Kunkle cited a recent example. A new home was purchased from the builder's sample. However, the owner specified certain changes in design which increased the total area of the home. The builder then advised the owner that he should discuss the changes in the heating requirements directly with his heating contractor; namely, R. L. Stott & Co., Inc. Thus, a face-to-face relationship was established between the dealer and homeowner. The heating system was redesigned to accommodate the changes. At this point individual preferences were considered and the result, as occurs frequently, was the installation of an oilfired hot-water heating installation.

Acting, virtually, as the builder's heating representative, Stott has the "inside track" on such jobs. His recommendations are usually acceptable to the owner and the builder. This confidence is not without a solid foundation. Earl Kunkle indicated that, although they make a profit on all such

Gordon Stott, president, R. L. Stott and Co., Inc., Fox Chase, Penna.

work, they take special pains to be reasonable with the builder's customer as well as with themselves. This attitude of doing the best job for the builder's customer at a fair price is motivated by the desire to eliminate any problems relating to the heating job for the builder; and secondly, by the desire to make that homeowner a future fueloil customer for Stott.

The additional costs are paid for by the homeowner in one of two ways. Frequently, the buyer will contract with Stott directly and pay in cash for the additional costs, beyond the original building price. In other cases the added costs are incorporated into the total cost of the home and Stott is paid through the builder during the time of settlement.

This might appear quite a cumbersome practice for a builder. Yet, upon closer appraisal, the builder is at an advantage by having a heating expert at his call. Kunkle explained that his builder customers always suggest that he talk directly with the home buyer when it comes to making any change in the original heating plan. The builders, in these cases, have expressed their preference for this relationship because: 1) the responsibility for insuring a properly working heating system is definitely established with Stott; 2) it eliminates the builder as a "middleman" and brings the price of these changes to the homeowner down to a minimum; 3) experience has established this practice as mutually beneficial to Stott, the builder and the customer.

The fact is that Stott fully assumes the responsibility for the heating system and is capable, because of his efficient installation and service department, of fulfilling every minute wish of the builder or homeowner at a moments notice. This undoubtedly is the primary reason why Stott has been getting this new home business in the face of the extreme competition of gas.

Earl Kunkle, manager of the heating department, R. L. Stott & Co., Inc.

C. W. Schrenk, a builder of custom homes in the North Hampton section of Bucks County, adds some additional considerations to Earl Kunkle's sales story. Although this builder favors neither oil nor gas heat, he finds that the advantages of working with a fueloil dealer who does installation work are sufficiently important for him to continue to specify oil heat. According to Schrenk, the greatest value offered by Stott is flexibility. To a builder who has just a few custom homes going up at once it is a necessity to be able to make the necessary changes as desired by the homeowner. Moreover, it's helpful when his heating contractor personally attends to this matter with the customer.

Schrenk also told how promptly Stott furnishes service. For example, it often becomes necessary to start up a heating system during some phase of construction. It may be to dry plaster or prevent a newly installed wood floor from buckling because of dampness, or they may want to keep the building warm enough for working men to finish the interior during a cold spell. Schrenk stated that if he called Stott's firm in the morning he would have heat in that building before the day was over. By compari-

Holland Manor Homes, one development where Stott installed oilheating.

son, if he were dealing with the local gas utility, the same request might be complied with in about a week or more, provided, however, the house was already completed. It was the rule of the gas company to connect the gas only after the home had been finished. Undoubtedly, this is a necessary safety measure.

The builder also felt the good effects of the continued responsibility of Stott. The fact that Stott fully assumed the servicing responsibility of the entire heating system for the first year, coupled with the desire to continue to furnish oil to the home, assured a degree of satisfaction to the builder and his customer that more than compensated for any difference in the original installment price. Schrenk also noted a preference for dealing with a contractor in a competitive atmosphere. On the other hand, the gas company represented a monopoly in the community which frequently dictated the terms of the agreement. Added to this the gas utility offered a relatively inflexible and impersonal relationship.

More than merely having the ability, Gordon Stott stated that the idea of the customer being the boss permeates the entire organization. The opportunity to demonstrate the ability to quickly care for a customer's need is never overlooked. Beneath all of this exists what Gordon Stott called an "oil consciousness." Specifically, the entire organization is oriented to the firm's basic business; namely, the distribution of fueloil. The various segments of the firm, such as service, storage, deliveries, and equipment sales all are directed toward maintaining satisfied customers together with acquiring new fueloil customers.

It is no chance happening that Stott secures new home heating installations in a predominantly gas equipment market. It is the result of a long term steady pull, reinforced by an aggressive organization. The builder trade has been built up over a 15-year period. Most of these builders have been customers of R. L. Stott for many years. Kunkle stated that in the past he called upon some of these accounts for a number of years before he got his first order. In addition he cultivated the friendship and confidence of many of these builders when they first started in business and had very few jobs to offer. Kunkle emphasized that Stott always gave these builders all the attention and service that his firm could offer.

Builder C. W. Schrenk was personally doing a small job of earth moving on this day when Earl Kunkle of the Stott organization made one of his regular visits.

Another source of business comes from the individual who is building his own home. If Kunkle reaches this person in time, he can usually sell an oilheating job. Kunkle stated that in these cases he emphasized the positive aspects of the particular oilfired job that he suggested for this house. He cautioned against introducing extraneous elements in selling that will cause doubts and create mental reservations in the minds of the buyer. He specifically advised against any arguments of oil versus gas. This he feels is like an auto salesman who, instead of selling the car on hand, starts a discussion on the hazards of driving. This tactic will delay a sale by causing the customer to become afraid of any car. Keep the sales talk simple. Design a system that is best for the customer and sell its virtues completely.

Gordon Stott uses an unusual technique for locating new building starts in a widely spread suburban area. Being an airplane pilot and having his own plane, he periodically surveys his community from the air for new land development projects. These projects are referred to the sales department for immediate investigation.

The primary purpose of trying to reach the land developer as soon as possible is to anticipate the gas company reaching for these projects. Kunkle explained that where the gas utility reaches a developer and runs mains through the streets, the builder, and eventually the owner, has to pay an additional $75 fee to the gas utility for each building that does not use gas for heating. Frequently, this additional $75 burden is the last straw that sways the builder away from oil heat.

At R. L. Stott & Co., the heating and airconditioning department is operated as an independent entity. It has been able to carry itself well financially and has been coming up with a profit each year. The heating department has been employing about 20 men year-round on oil heat installations. Usually, there are more than five jobs under way. For his warm-air work Stott has been using Chrysler Airtemp equipment. For his hot-water heating work he has been relying on Marietta boilers.

What does all this add up to? Beyond the profitable equipment business, R. L. Stott & Co. has built a fueloil distribution of more than 8 million gallons a year. Gordon Stott, the president, admitted that the going has been getting harder lately, but he has definite plans to continue this work and develop at a relatively proportionate rate with the growth of the community in which his firm operates.

Upgrading the Evidence

A burner service record System that saves Time and Money

by M. J. Reed*

MANY fueloil distributors regard burner maintenance as a necessary evil, a money losing activity they would like to avoid, but one that must be undertaken to hold and extend fueloil sales volume. Because of this defensive attitude, they often keep inadequate and uninformative records.

It may, of course, be merely a coincidence, but it has been noted that the distributors who operate the most successful maintenance departments are the ones who regard burner maintenance as a valuable sales promotion tool. They also have the best maintenance records.

Let us assume that you have 1,000 fueloil accounts. Would it be to your advantage to know in less than 20 minutes:

The number of fueloil-only accounts,

The number of tune-up jobs in the past 12 months,

The number and kind of maintenance contracts outstanding,

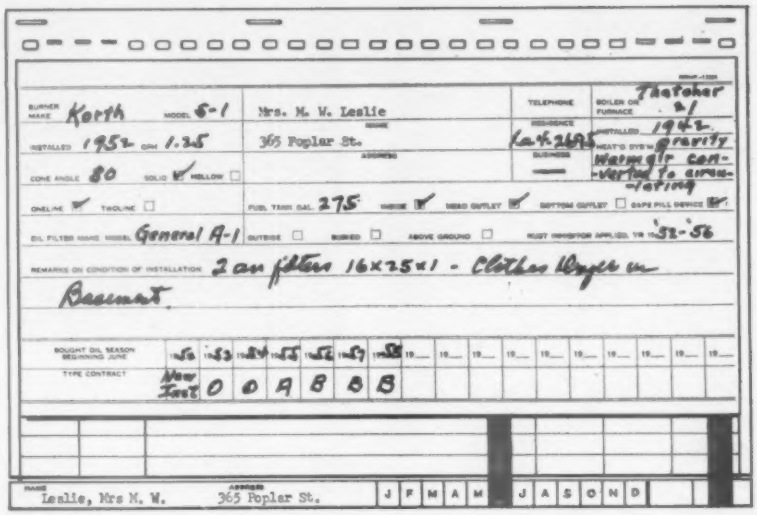
The number of free service calls in the past 12 months,

The number of paid service calls in the past 12 months, and

The number of accounts lost in the past 12 months?

In addition to this kind of information, how about the value of having all the facts about any one account—kind, size and age of burner, boiler or furnace, nozzle information, filter data, fuel tank data, type of heating system, length of time served, and all maintenance done from the beginning—on one record you could find in five seconds?

You may say that it would be fine to have such information so quickly available, but that you could not afford the extra clerical help needed, especially as maintenance is now losing money. Yet there is a big possibility that such records would cost you no more than poor ones and, once set up, would actually save time and money from then on.



Installation information on typical master record for high-pressure burner. It is shown in its visible index pocket. As the text explains, the signals along the bottom edge of the card provide color coding to indicate the type of customer—oil only, oil plus annual tune-up or oil plus tune-up plus maintenance, for example. If an account is lost, the color signal is removed. The signals when positioned in the squares indicating months of the year then show dates of tune-ups, no-charge calls or billed calls. Any contrasting colors may be used.

This introduction sets the stage for a description of a new service record system which adds a master record form to those now being commonly used. It may seem odd at first that an increase in the number of forms could save time with no increase in clerical help, but careful studies indicate that in this case it does. And most importantly, it gives you a powerful new aid in the fields of sales promotion and customer relations.

At the outset you will need a form for recording incoming calls and their disposition. You have such a form now, of course, and no change is proposed except to suggest that you check to see if it shows the following information:

Name and address of caller

Date, hour and minute of the call

Nature of complaint by the caller

Service man to whom call was assigned

His time out and in, with date, hour and minute in both cases

Service order number

The next form you need is a service order or call report. You already have this, too, so its use means no added burden.

The new master record should save time by permitting the numerical filing of these service orders. Without such a record, orders must be filed alphabetically, because they constitute your only customer record. So you have to take the time to file "Jones, P. C." between "Jones, O. M." and "Jones, R. A." But with a master record, it is easy and quick to find No. 536 in order to file No. 537 in back of it. And because of the master record, you probably will not need to refer to the service order again, but if you should need to, it is quickly found in its numerical order.

The master record has provisions for recording:

Name and address, which can be

*Products Department, Gasoline & Fuel Oils, Technical Division, Socony Mobil Oil Co., Inc. The service record system which is described was developed and introduced by Mobil about two years ago.

written in, typed, or stamped on by an address stencil.

Burner make and model—this information will be helpful to a service man going out to make a tune-up.

Burner installation date—this could help in locating prospects for replacement burners.

Nozzle data, such as gph rate, spray angle, whether solid or hollow cone. Such data help a service man going out on a service or tune-up call.

Fuel system information, such as one-line or two-line, and oil filter make and model—this might indicate the reason for a burner failure (one-line system on an outside tank); it might also enable the service man to take along the proper filter cartridge on a tune-up job.

Fuel tank information, including capacity; whether inside or outside; if inside, whether bottom or head outlet; if outside, whether buried or above ground; whether there is a safety filling device; whether anti-rust inhibitor has been applied and if so in what year. Tank information will help should you wish to start a rust-inhibitor program, to put the account on automatic delivery, to spot buried tanks on one-line systems, or to anticipate winter pour-point difficulties.

The space headed "Remarks on Condition of Installation" is provided for noting such conditions as: burner or boiler in poor condition, poor combustion chamber, anything unusual about controls, clothes dryer or power woodworking tools in basement, inferior air vents on radiators, poor wiring, customer use of outside service, or customer services burner himself.

The card also provides for noting the heating seasons in which the customer bought fuel and on what basis. For example, your code might be:

O—oil only
A—oil plus annual tune-up only
B—oil plus tune-up plus some guaranteed maintenance

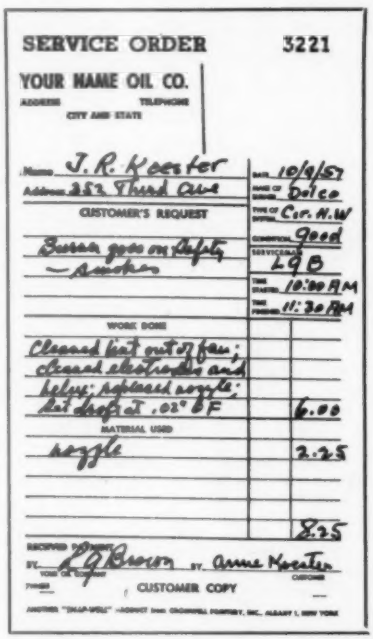
The card has provision for recording all information from service orders. This begins with the date of the call and the service order number. The latter is recorded against the possibility that you might some day wish to consult the service order itself. Probably you will not need to do so often, especially if the master is not briefed down too much; but if you do, it will be easy to find it in its numerical file.

Finally, there are spaces for a description of the work and for entering customer charges for labor and material. The card has a bottom strip that is torn off before filing. It merely facilitates the typing of a name and address on the visible strip.

Usually the service order information must be briefed down for entering on the master record, but it should be in sufficient detail to state all pertinent information intelligibly, even if several lines are required. There is no point in having a master record if the information is so abbreviated that no one can tell what it means. The room on this card is sufficient for several years under normal circumstances, and after it is filled the account can be given a second card with the proper notation on the visible strip, as will be covered later.

For example, an entry saying "adjusted burner" means almost nothing; but a story is told if the entry says, "Set draft at 0.02, cleaned electrodes, replaced nozzle."

In the second entry it is clear that the service man found the nozzle plugged and the electrodes carbonized. The cause was too little overfire draft.


SERVICE ORDER 3221

YOUR NAME OIL CO.

ADDRESS TELEPHONE
CITY AND STATE

Name J. R. Koester
Address 252 Third Ave
CUSTOMER'S REQUEST
Burner goes on Safety — Smokes

Date 10/9/57
Make of Burner Dalco
Type of Burner Cup. N.W.
Condition Good
Serviceman LQB
Time Started 10:30 AM
Time Finished 11:30 AM

WORK DONE
Cleaned unit outside; cleaned electrodes and below; replaced nozzle; set draft at .02" F — 6.00
MATERIAL USED
nozzle — 2.25
— 8.25

Received Payment By L.Q. Brown By Anne Koester
CUSTOMER COPY

"Snap-Well" service order form, with an original and two carbon copies in each set. One copy of the form goes to the customer, the second to the billing department and the third is used o build a master service record.

Complete Reports essential

Service men should be impressed with the necessity for making out service orders for every call, whether billed or no-charge. Some may feel it is a waste of time to record a no-charge call, but the information about it is as necessary as that for a billed call—sometimes more so. Whoever transfers service-order data to the master record should also make sure that *all calls* are included. Certainly a succession of no-charge calls should stand out in the record—as it will if entered—so an investigation can be made. As far as that goes, an investigation of any close series of billed calls should also be made, as a dissatisfied customer might result if the situation is not corrected. The master record will focus your attention on such potential trouble while there is time to do something about it.

The lower edge of the master record allows for several items of information that will be *visible* in the filing system. Master record forms should be kept in pockets and the pockets in trays. When set up this way, the lower edges of the forms are visible like the weather-exposed ends of roof shingles.

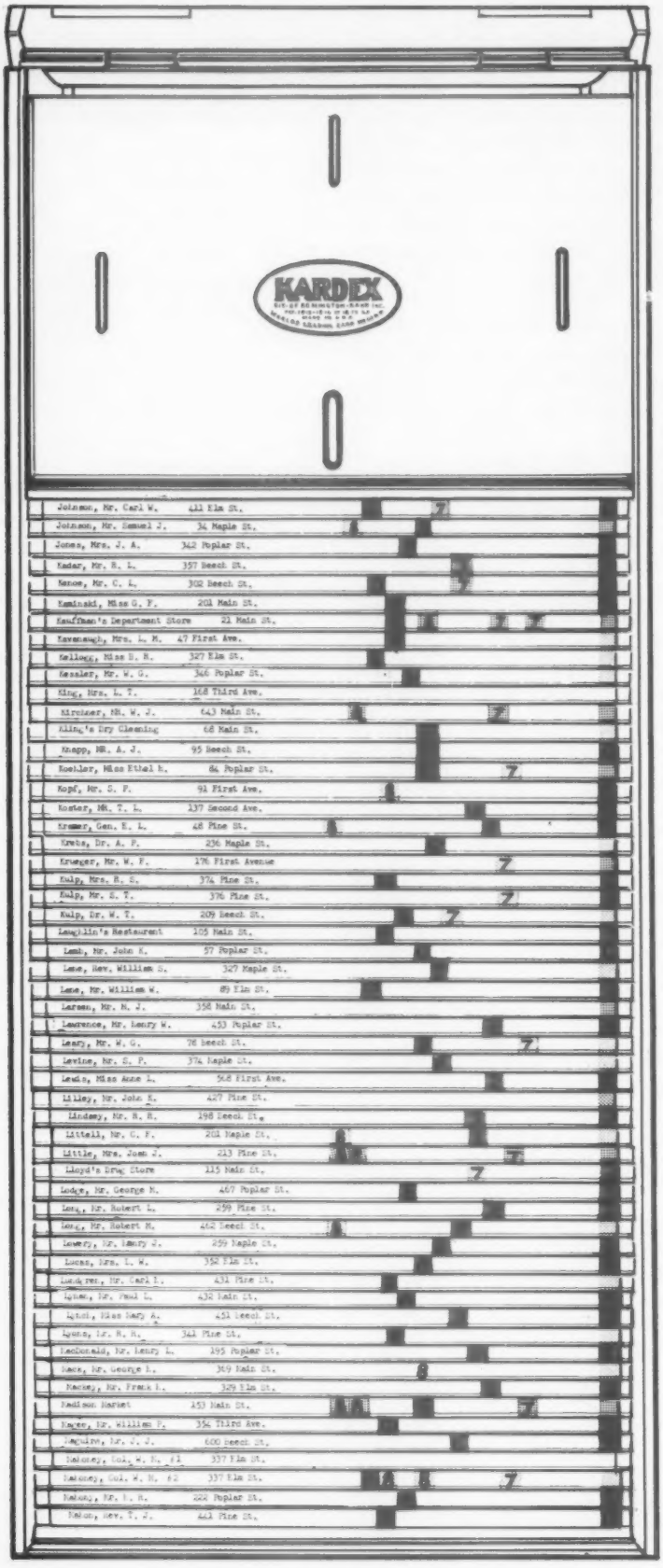
The visible bottom repeats the customer's name, not in Addressograph form, but for filing—Smith, A. C., for example.

At the extreme right is a square for a color coding. This might be:

Orange—oil only
Green—oil plus annual tune-up
Red—oil plus tune-up plus maintenance

Any three contrasting colors available would be satisfactory. If you lose an account, you should remove the colored signal, leaving this space blank.

The 12 squares beginning in the center and extending to the right are for the months of the year. In the illustration they have been signaled as they might be on July 1, 1958. A green signal might mean a tune-up, a red one a no-charge call, an orange one a billed call. The numeral indicates the year. Signals bearing numerals can be procured; but you can use blank ones and fill in your numerals if you wish.


KARDEX
Johnson, Mr. Carl W. 411 Elm St.
Johnson, Mr. Samuel J. 34 Maple St.
Jones, Mrs. J. A. 342 Poplar St.
Kadar, Mr. E. L. 357 Beech St.
Kanon, Mr. C. L. 302 Beech St.
Kaminski, Miss G. F. 201 Main St.
Kauffman's Department Store 21 Main St.
Kavanaugh, Mrs. L. M. 47 First Ave.
Kellogg, Miss D. H. 327 Elm St.
Kessler, Mr. W. G. 346 Poplar St.
King, Mrs. L. T. 168 Third Ave.
Kirchner, Mr. W. J. 643 Main St.
Kling's Dry Cleaning 68 Main St.
Knapp, Mr. A. J. 95 Beech St.
Koehler, Miss Ethel R. 84 Poplar St.
Kopf, Mr. S. P. 91 First Ave.
Koster, Mr. T. L. 137 Second Ave.
Kramer, Gen. E. L. 48 Pine St.
Kreis, Dr. A. P. 256 Maple St.
Krueger, Mr. W. F. 176 First Avenue
Kulp, Mrs. R. S. 374 Pine St.
Kulp, Mr. S. T. 376 Pine St.
Kulp, Dr. W. T. 209 Beech St.
Laughlin's Restaurant 105 Main St.
Lamb, Mr. John K. 57 Poplar St.
Lane, Rev. William S. 327 Maple St.
Lane, Mr. William W. 89 Elm St.
Larsen, Mr. M. J. 358 Main St.
Lawrence, Mr. Leary W. 453 Poplar St.
Leary, Mr. W. G. 76 Beech St.
Levine, Mr. S. P. 374 Maple St.
Lewis, Miss Anne L. 568 First Ave.
Lilley, Mr. John K. 427 Pine St.
Lindsey, Mr. R. R. 198 Beech St.
Littell, Mr. C. F. 201 Maple St.
Little, Mrs. Jean J. 213 Pine St.
Lloyd's Drug Store 115 Main St.
Lodge, Mr. George M. 467 Poplar St.
Long, Mr. Robert L. 259 Pine St.
Long, Mr. Robert M. 462 Beech St.
Lowery, Mr. Henry J. 259 Maple St.
Lucas, Mrs. L. W. 352 Elm St.
Luckner, Mr. Carl L. 431 Pine St.
Lyons, Mr. Ward L. 432 Main St.
Lytel, Miss Mary A. 451 Beech St.
Lyons, Mr. R. R. 344 Pine St.
MacDonald, Mr. Henry L. 195 Poplar St.
Mack, Mr. George L. 349 Main St.
Mackey, Mr. Frank L. 329 Elm St.
Madison Market 153 Main St.
Magee, Mr. William P. 354 Third Ave.
Maguire, Mr. J. J. 600 Beech St.
Mahoney, Col. W. H. #1 337 Elm St.
Mahoney, Col. W. H. #2 337 Elm St.
Mahon, Mr. L. R. 222 Poplar St.
Mahon, Rev. T. J. 221 Pine St.

Mrs. King, on line eleven, is a lost account. Possibly she moved and the new owner is a personal friend of the proprietor of the John Doe Oil Co. Possibly the driver spilled oil on her lawn. The reason, as nearly as you can determine, should be noted in the "remarks" space on her card. At the end of the season her card and other lost account cards might be removed and located in a tray of lost accounts, for future solicitation—or at least for an analysis leading to changes designed to reduce the annual number of lost customers.

M. J. Larsen and John K. Lilley are "oil-only" accounts but do not show any service calls in 12 months. Possibly their cards disclose they are "do-it-yourselfers," or maybe they have mechanically apt brothers-in-law.

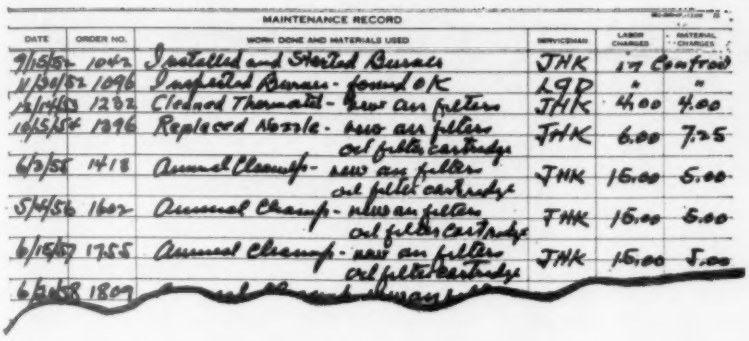
The Madison Market is coasting along on a tune-up made in 1955 and service calls are beginning to pile up. A polite letter pointing out the situation and suggesting another tune-up is called for here.

Col. Mahoney has been a customer for years and his data have already filled one card—marked #1. He may also be a fuss-budget, as the signals show three no-charge calls, one of them only a month after the latest tune-up. Such a situation raises questions. Is he overly fussy? Was something neglected during the tune-up? Is something fundamentally wrong? For the sake of a loyal customer, not to mention yourself, you would want to find out the truth.

You can see that, by lining a ruler vertically at any month, you can instantly spot accounts due for tune-ups. If you have zoned areas you may wish to shift the timing one way or the other for some accounts in order to save service men's time.

Any burner that has required an excessive amount of service really stands out in this system. Whether the service is on a call-in or guaranteed

A typical visible index tray of master record cards. This one by Remington will cost between 40¢ and 50¢ per account on the basis of 1,000 accounts. There are other systems, Diebold, for example, estimated to cost about 16¢ per account at the 1,000 account level and Visirecord, calculated to cost approximately 20¢ per account. Cards in the tray are tabbed as of July 1, 1958.



MAINTENANCE RECORD

DATE	ORDER NO.	WORK DONE AND MATERIALS USED	SERVICEMAN	LABOR CHARGES	MATERIAL CHARGES
9/15/52	1042	Installed and Started Burner	JHK	17	Contract
11/30/52	1096	Inspected Burner - found OK	LQD	"	"
4/14/53	1282	Cleaned Thermostat - new air filters	JHK	4.00	4.00
10/15/54	1996	Replaced Nozzle - new air filters oil filter cartridge	JHK	6.00	7.25
6/3/55	1418	Annual Cleanup - new air filters oil filter cartridge	JHK	16.00	5.00
5/14/56	1602	Annual Cleanup - new air filters oil filter cartridge	JHK	16.00	5.00
6/15/57	1755	Annual Cleanup - new air filters oil filter cartridge	JHK	16.00	5.00
6/20/58	1809	[illegible]			

Maintenance record that might apply to the equipment described on the illustrated master record for high-pressure burner. The card has provision for recording all information from each service order, beginning with the date and number of the service order. Then there are spaces for description of the work done and for recording serviceman's initials, plus customer charges for labor and material.

basis, you will want to investigate. The owner may be a prospect for a new burner, or at least in line for some major repairs. If he is not approached he will probably become an active prospect for gas heat. Certainly if you have been giving him a guaranteed maintenance contract, you should not continue it.

Quick call-backs after tune-ups will also stand out prominently. They deserve investigation to determine if the installation or the service man is at fault. In either event, action can be taken before customers complain.

If you provide burner service by contracting with an outside firm for maintenance work, a record such as this is vital in your efforts to provide the quality of service your customers are entitled to. One of the service order carbons, which you may be getting now, is all you need.

The tray shown in the illustration has 56 pockets. Trays having up to 72 pockets are available, and cabinets come with capacities for as few as 8 or as many as 17 trays. A 17 tray cabinet, each tray having 72 cards, takes care of 1224 accounts.

Now for a look at time savings. No doubt you will agree at the outset that you can find an account in this visible index much quicker than you could in a tray or drawer of cards or paper slips, even conceding that the cards or slips are filed alphabetically. If cards are not filed accurately, the time required to fish out the one you want, or perhaps *all* of the slips for one account, becomes greater.

If, as is often true, all information is not on one card, the waste of time becomes greater. There are systems in which tune-ups and free service calls are recorded on one card filed in one drawer, while paid service calls are recorded and filed separately. And, of course, it is common to find no records at all except service orders filed "alphabetically," but by seasons, one season in one drawer, another in a second. Any burner that is requiring more service season after season escapes notice entirely.

Assume that an oil-only customer calls up to ask about a guaranteed maintenance contract. You should know the approximate age and condition of his burner, how his paid service calls have been running and anything adverse about his installation, such as, for example, a very old boiler in poor condition. With your present record system, how long will it take you to size up his situation over the past four or five years? If it requires over five minutes, this visible-index master-record system will help.

Of course, you could take a chance and give him a contract without bothering to look up the facts; but if you do, you will lose money on perhaps one out of every six or seven such contracts. Instead, you should be selling replacement burners to these people.

Say customer Jones on Elm Street, an "oil-only" account, calls to ask you for a contract just like the one (he says) you have with Mr. Smith on Poplar Street. How long does it take you to find Smith on Poplar, considering that you may have several maintenance "packages," 15 Smiths on the books, and some misfiling among the Smiths in your non-visible index? Add this to the time you must spend to look up Jones' installation.

As a rule, if a telephone complaint about service is handled promptly "on the customers' dime," the answer carries much more conviction than it would if reported during a call back after 15 minutes—or maybe even longer. With a visible index and one free hand you can answer at once. It is truly a "one-armed man's index."

Should a complaint be such that you must go back to the service order, you are still in a position to save time. The master record will show the order number, and the slip is quickly found in the numerical file. Perhaps the complaint is about a delay in service. The master record gives the number and the numbered slip shows the times involved. If the incident is recent, the master will also show the date and your incoming call record for that day is quickly located.

Sales promotion Tool

Besides being a time saver, a visible index is an important cog in your public relations and a powerful tool in sales promotion. Many an automobile, television set and automatic washer is sold today because of a local distributor's reputation for quick, reliable, efficient service. Such a reputation is an even more powerful sales weapon in oilheating, for people can ride a bus to the movies while a laundry does the clothes, but they can't keep a house warm with candles. Indeed, your progress and that of oilheating in general is hinged today more than ever before on quality of service. Anything which improves your quality makes it that much easier for you to gain and hold new customers.

It may well be that you are now equipped with efficient records supplying you with accurate facts quickly; but if not, the installation of this record system or its equivalent can pay its cost many times over in time saved, will furnish you with good prospects for new burners, will increase your burner service efficiency and promote a reputation for you in your community that is bound to be highly profitable.

Fueloil Sales via burner Know-how

Technical oil heat Knowledge puts Power behind the sales Punch of Parfield Oils Ltd.

by John W. Schulz

THE FUELOIL customers of Parfield Oils Limited, Ottawa, Canada, are getting the benefit of an unlimited knowledge of everything there is to oilburners, oilheating systems, and combustion.

The objective of this leading fuel-oil supplier of Ottawa, Parfield Oils, is to have its thousands of oil customers enjoy oil heat at its best—at its most dependable, comfort-producing, troublefree, and economical best.

Now, the executives of Parfield Oils were not unique in setting up their objective. The executives of many other companies believe their fueloil customers should be helped, by oil companies, so that oil heat in general works out to be enjoyable.

Parfield Oils differs from most other fueloil retailers, however, in being feverishly determined in its efforts to put oil heat know-how to work for its oil customers.

The executives of Parfield Oils are, to start out, vigorous and enthusiastic advocates of oil heat. Avid scholars interested in everything pertaining to modern heating, these executives continue working at and thinking about oil heat following business hours.

Their activities which pertain to company policies include three branches:

First, taking definite action to keep fully informed. Naturally, this includes continually gaining knowledge of the latest methods for running a fueloil retail organization at peak efficiency. In addition to this, which the Parfield Oils executives consider to be necessary and routine, these men go on with peculiar intensiveness to studying literally everything new that comes out in the field of oilheating equipment—and all latest developments pertaining to the best methods for installing and servicing oilheating equipment.

Second, these executives carefully use their knowledge of latest methods and most modern oilheating equipment to arrive at decisions of company policy, and of which actions the company should take.

Third: Having decided on action, these men and their entire organization really go into action.

The end result is action, taken by the men who work for Parfield Oils Limited, which benefits the fueloil customers of the organization—which gives these customers better oil heat.

In a one-week study I recently made of the activities of Parfield Oils, I found direct evidence of how this organization winds up with actually giving its customers better oil heat—much better oil heat than these customers would have if Parfield Oils thinking and activities were not directly planned to benefit these customers.

The one-week study I made included hours of on-the-job studies of equipment performance, observing the installation of new equipment, accompanying servicemen answering service calls, as well as time spent in the office and showroom with executives.

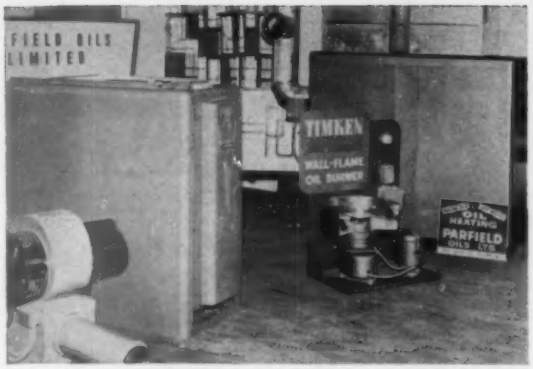
The direct evidence of how Parfield Oils winds up giving its customers better oil heat has to do with the combustion testing activities.

In just about the same way that everyone talks about the weather, but nobody does anything about it, fueloil retailers in general agree that combustion testing is good, is even excellent. But then, fueloil retailers do nothing about it.

To put things conservatively, that is, 49 out of 50 fueloil retailers do nothing about it. Parfield Oils Limited is the one company out of 50 that does

Parfield organization is headed by executives who are dyed-in-the-wool oilburner men! Dick Watson, at the right, is the manager and vice president who injects into the fueloil organization the oilheating ideas that give the oil customers better oilheating. Bob Cockburn, left, is the Industrial Division Manager, handling burner sales for Nos. 4 and 5 oil.

The arrival in the office of two servicemen, with evidence of an unusually high CO_2 reading locked up in their analyzer, and low smoke-reading evidence to match, causes a gathering of admiring executives. All of these men know that exceptionally excellent oilburner performance, proved by combustion tests, helps to build their oil business!



Right-hand side of showroom contains, at left, a Sun-Ray gun burner for Nos. 4 or 5 oils. Next to this is the Iron Fireman Mark II oil-furnace. Then there's the cut-away of a Timken wall-flame burner, and a Timken oil-furnace. Containing many modern and unique features, the array of equipment gives Parfield salesmen much to enthuse over.

Parfield provides complete oilburner installations, on a rental basis involving a monthly charge for each of the 12 months of a year, for tenants occupying houses not equipped by their owners with oilburners. A rental oilburner installation was provided for this two-family house, equipped with gravity warm-air heating.

anything about it . . . that makes a big point of giving every one of its fueloil customers the benefits of combustion testing.

The facts about the benefits of combustion testing are well known. It includes obtaining readings of over-fire draft and smoke-outlet draft. Taking these readings insures making best use of proper chimney draft on installations which have this. It heads off difficulties on installations having chimney draft only borderline good. It diagnoses properly any draft trouble that needs attention. It avoids waste of oil caused by excessive draft.

Combustion testing includes taking readings of haze or smoke. Doing this emphasizes the importance of achieving clean, complete combustion. It helps wind up with chimneys giving no visible smoke, furnace rooms and boiler rooms remaining clean and spotless, and indirect heating surfaces requiring cleaning only occasionally. Readings of smoke or haze also arrive at fuel savings, as they encourage servicemen's efforts to adjust oilburners for maximum efficiency.

The readings of CO_2 and stack temperature, which are obtained during a complete job of combustion testing, combine to form an item of prime importance. Put together in effect by application to a chart or table, these two readings wind up giving the stack loss of the installation. They tell if the all-important stack loss is pleasingly low, intolerably high, or in-between.

The stack loss is all-important because it is the only loss of many installations, and at its lowest it can be less than 15% of the heat in the fueloil purchased, whereas at its highest it can be more than 50% of the Btu's purchased in the fueloil.

To be highly efficient, an oilburner installation must have a low stack loss. Any installation that has a high stack loss, say 35% to 50% of the heat in the fueloil burned, necessarily is highly wasteful and inefficient. On many installations, servicemen making oilburner adjustments can wind up with stack losses either unusually low or unusually high. On many installations, efforts to minimize fueloil bills boil down to striving for minimum stack loss. Efforts to minimize fuel consumption are more than helped by combustion testing instruments. If fuel consumption is to be minimum, such instruments must be used by oilburner servicemen.

Everyone at all informed about oilburners knows the preceding points. Government agencies, magazines for homeowners, oilburner manufacturers, makers of oil-boilers and oil-furnaces —everyone, right down the line—recommends emphatically that domestic oilheating equipment be given the benefits of combustion testing on a regular basis.

The typical fueloil retailing organization agrees that regular combustion testing is necessary for the most satisfactory and most economical use of fueloil; it has no choice but to agree, for failure to agree would reveal its complete ignorance of the fundamental principles of fueloil combustion and oilheating equipment.

Yet, the typical fueloil retailing organization does not go into action to give all its customers the benefits of regular combustion testing. Only the one fueloil company out of 50 does this. After stacking up and considering all the facts, Parfield Oils Limited decided to go into action and make regular combustion tests for all its fueloil customers. These tests are usually made once-a-year for homeowners; in certain large boiler rooms, they are made as often as once a week. Thus this company made itself the outstanding organization.

As pointed out at the start of this article, the executives of Parfield Oils Limited are vigorous and enthusiastic advocates of oil heat. They talk in terms of latest oilheating principles and theories; but they can talk as well in terms of nut-and-bolts, wiring diagrams of particular installations, and dirty-hand work.

Louis Coplan, founder and president of the Parfield organization, could from his appearance be the head of a university. From many years of experience, he knows finance and management aspects of his oil company. Yet, having contributed advanced ideas to the automatic fueloil delivery system his company uses, surprisingly he can sit down to work scheduling deliveries himself, doing routine office work, and planning routes for his oil trucks. In addition, he keeps informed

Parfield serviceman, in uniform jacket that proudly bears the company name, makes a smoke test. This test is made before a CO_2 test is made. The premise is that chimney gases must be free of smoke, regardless of the CO_2 reading. With no smoke, excellent combustion is accompanied by a high CO_2 reading.

As experts can tell from this photograph, here the serviceman has obtained a CO_2 reading above 12%. On this installation, the flame is being given only about 25% excess air. Excellent readings of this kind cause the serviceman to be proud of the quality of the fueloil being delivered, proud of his adjustments, and the oilburner.

Two Parfield servicemen check the smoke-outlet draft of a furnace, which turns out to be .03" on this Bacharach draft gage. On this particular installation, they use only .01" over-fire draft. The rule is: Use the lowest over-fire draft that does not give any of the troubles of insufficient draft.

Stack temperature is being checked. The thermometer is inserted in the smokepipe between the draft regulator and the furnace, and preferably two feet from the draft regulator. The reading is taken when the thermometer needle no longer moves rapidly. Good, standard practice is to fire a cold furnace 15 minutes or so, then read the thermometer.

on latest developments in the field of oilburners and all types of oilheating equipment. He is as much a dyed-in-the-wool oilburner man as are the other executives in his company.

R. E. Watson, manager and vice president of Parfield, excels at weaving oilburner ideas into the operation of the oil company—ideas about which types and makes of oilburners the company's oil customers should have, and how these should be installed and serviced. He continually stresses that Parfield's objective is to provide its fueloil customers with better oil heat; by that he means oil heat that's better than it would be if the Parfield organization were not striving continuously and calculatedly at improving oil heat.

C. A. Lafrance is sales manager. "Serving the public" seems to be too abstract a term for him. As I watched him in action and noted how he treated each fueloil customer as an individual, I learned he uses a person-to-person relationship instead of trying to employ "general public" relationships.

Larger Equipment

Manager of the Industrial Division is Robert S. Cockburn. Parfield has been handling heaviest fueloils, Nos. 5 and 6, only in recent years. Cockburn's work includes engineering and sales of burners, newly added to Parfield's line of equipment, for these oils. He proudly shows new Sun-Ray gun burners, using No. 4 or No. 5 oil, installed to heat apartments.

Parfield Oils Limited is, in one sense, cautious and conservative in a manner becoming to its age and size.

Yet, aiming to be always correct in every detail, it calculatedly makes a point of doing things to improve the oil heat enjoyed by its customers.

The executives of Parfield know that the stack loss is the big loss of an oilburner. Bringing down this loss reduces fuel consumption.

Ever alert for new ideas, in fact feverishly seeking them, the executives of Parfield have studied many ideas, notions, and equipment arrangements purported to reduce appreciably that all-important stack loss.

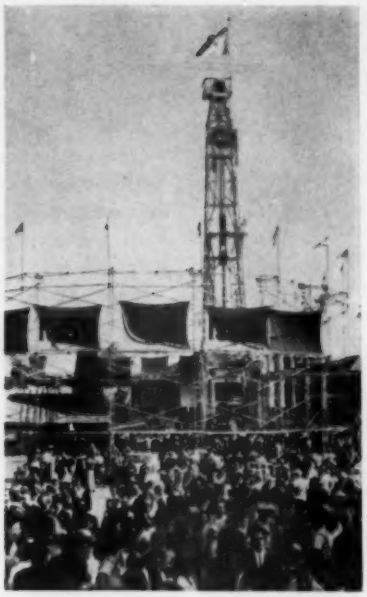
They have studied, among other things, economizers made to be installed in smokepipes for the purpose of reducing stack temperatures greatly . . . smokepipe draft controls of unusual kinds, not the "approved" and orthodox types, and proclaimed to save much fuel . . . combustion-chamber improvement arrangements . . . and even equipment set-ups to close smokepipes off tightly when oilburners are idle. They have studied several different types of oilfiring arrangements, complete oilburners that fire in unusual fashions supposed to produce exceptionally high efficiencies, and attachments to change the nature of the flames of usual oilburners. (Parfield men showed me one of their field projects which included three identical apartment-house heating boilers, one fired by a conventional pressure burner, the second fired by a vertical-rotary burner, and the third fired by a pressure burner having a vertical nozzle in the center of a bowl-shaped combustion chamber. Parfield men were studying closely the combustion readings achieved by each arrangement, and the resultant oil consumption. Each of the three boilers was heating an identical apartment house. The owner of the houses was cooperating with, and benefitting by, the test project.)

Practical Approach

Parfield men conclude that certain unorthodox arrangements, allegedly installed to reduce fueloil consumption, are the results of the erroneous thinking of men who are well intentioned but misinformed. Other unorthodox arrangements may represent victimizing, hypnotizing, or spellbinding of the burner owners by outright tricksters.

The overall Parfield conclusion is that fueloil business can be built on a firm foundation by employing thoroughly good business practices, and giving fueloil customers the benefits of solidly good oilburner knowledge. No one can argue that Parfield is wrong in its practice of providing combustion tests regularly for the oilburners of its fueloil customers. That, every authority agrees, is a vast improvement over usual methods of servicing oilburners.

Eastern States Exposition shows Oil to half Million



Vice-president Nixon and Senator Saltonstall start the oil drilling rig.

A MODERN ROTARY drilling rig, brought 1,300 miles from Oklahoma, demonstrated to New Englanders how petroleum products are brought from the earth. The occasion was the Eastern States Exposition held at West Springfield, Mass., September 19-27.

The new T-45 rig, capable of drilling in the 4,500 to 7,500 ft. depth range, stood beside a replica of the rig Edwin L. Drake used to drill his historic well at Titusville, Pa., in 1859, a hundred years ago. The Drake replica housed exhibits depicting oil's first century, including the tools Drake used to bring in his well.

The modern rig, 90 feet high, provided by the National Supply Co., Inc., Pittsburgh, demonstrated drilling techniques throughout. A hole 125 ft. deep was drilled in advance so that an oil field crew could show visitors how a drill pipe is rotated and raised and lowered as it would be in actual drilling.

The side-by-side exhibits allowed visitors to note the progress made by the oil industry . . . where Drake's well was drilled to only 69½ ft., today's drillers can reach 25,000 ft.

The Exposition, attended annually by 500,000 persons, mostly from Eastern States and Canada, was favored this year by Vice-president Richard Nixon coming for the special chore of opening the petroleum exhibit. Wearing a tin hat, he pushed the button that started the drilling operation on September 20. A. W. McKinney, president of National Supply Co., led Nixon, Mrs. Nixon, U. S. Senator Leverett Saltonstall of Massachusetts and Mrs. Saltonstall on a tour of the petroleum exhibit.

The petroleum phase of this important exposition was sponsored by the Oil Heat Council of Western Mass., Springfield, assisted by the Oil Heat Institute of New England, Boston.

The Springfield oilheating group also had an extra large display of its products in the exhibition buildings. Reginald Swett, president of the Council sponsoring the oil exhibits, reports that the full week's attendance was 531,000, a new high point. The Council gave out 50,000 shopping bags to visitors, with signs on each side, "Oil Heats Best." They also had a drawing each day to give away a year's supply of oil anywhere in New England. In all, 27,848 cards were signed for the drawing, with 95% of them showing addresses in Massachusetts, Connecticut or Rhode Island and the remainder spread over six Eastern states.

Swett remarked, "The public reaction was that oil is not a dying industry. The reactions from oil men so far have been highly satisfactory."

75th Anniversary, automatic Heating, promoted by Honeywell for 1960

It was 75 years ago, come next January, that an ingenious mechanic in Minneapolis named Al Butz got tired of switching drafts on his coal furnace and developed a crude temperature controller and a "damper flapper" that was to become the genesis of the present world-wide Minneapolis-Honeywell organization. The first name was the Consolidated Temperature Controlling Company, later the Electric Thermostat Co.

As a result the Honeywell top management group has planned an all-industry celebration throughout the year to interest all types of heating producers, distributors and the more active trade associations in forcibly bringing modern heating and airconditioning into the public spotlight.

They are confident that the decade of the "Golden Sixties" will not only see heating equipment sales reach unprecedented levels but also bring wide public acceptance of residential cooling. The 75th Anniversary year to start the decade is to be a springboard to activities that are designed to make American families more conscious of their indoor climate in all its refinements.

The Honeywell program will naturally be evident in its own sales promotion for the year, but its broader intent is to encourage all elements of the industry to take advantage of the promotion and publicity opportunities inherent in the scheme.

At an editorial conference in Minneapolis at the start of October, a dozen officials of the Company told of an array of projects quite certain to create a lot of interest as the year progresses. At the same time they were careful not to give the impression they were only looking back 75 years, rather that it's a fresh chance to plan ahead.

In a summary of automatic heating history, C. W. Nessell pointed out that all controls up to 1917 were designed for coal. In that year came the first oilburner thermostat and safety device. They simply replaced the crank arm of the damper flapper to a switch that controlled the burner motor. If the oil did not ignite it would accumulate in the bottom of the combustion chamber and run out through a spill pipe into a trip bucket that would break the circuit to the valve and motor. This turned out to be "not an entirely safe and acceptable system."

The first oilburner control relay came in 1923, and in the 10 years that followed 70 models or variations were marketed.

Throughout its history Honeywell has concentrated its engineering and product development on automatic control devices and systems, even though today the heating department is outsold by some others such as aviation. With 33,000 employees today and sales of $328 million last year the Company now operates in 59 foreign countries, with overseas factories in five of them plus 10 in America.

In addition to its heating and air-conditioning systems for homes and industry the principal fields of its work are: 1) industrial indicating and controlling instruments for automatic operations ranging from steel mills to atomic energy plants; 2) precision control systems for aircraft, missiles and space vehicles, including automatic pilots, gyroscopes, bombing systems and stabilization in inertial guidance systems; 3) precision snap-acting switches for everything from pinball machines to guided missiles; 4) valves for controlling the flow of all fluids; 5) control systems for armored vehicles, ammunition and other ordnance devices; 6) photographic equipment; 7) giant "brain" computers for data processing . . . in all 13,000 separate products. Four new developments appear on page 70.

Executives Participating

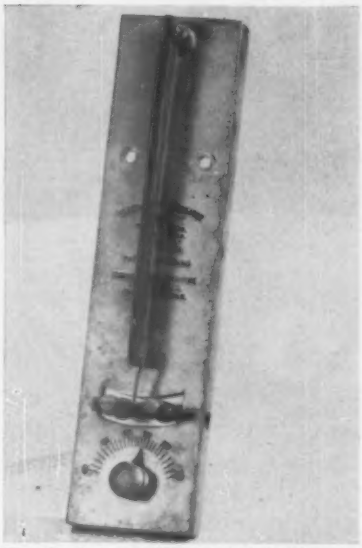
Paul B. Wishart

W. J. Baak

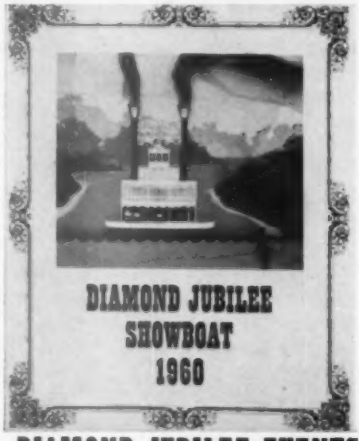
K. W. Schick

Tom Reed

Coal vs. oil; boys vs. girls; 1912 vs. 1959



The first home thermostat built by a predecessor company of Honeywell.



DIAMOND JUBILEE EVENTS

MILADY'S CLIMATE

PARADE OF PRODUCTS

WEATHER STATION

PUT YOURSELF IN HOT WATER

WEATHER WATCH

OLD TIMER TRADE WINDS

Quotes from vice presidents

"We think it is a good idea to observe our 75th anniversary in 1960 because we see it as a check point on progress. By this I mean it is a signal to stop, look at ourselves and look ahead to see what we can do better than we have done before.

H. D. Bissell

"We do not see our Diamond Jubilee as a time for self congratulations and back-slapping. In brief, we intend to use this year to jack ourselves up—to try to do more than ever before for our industry and all those close to us."

"Rather obviously, a space cabin, whether real or simulated, must control temperature and humidity and provide fresh, clean air. The atmosphere is a sealed one, and we must also control its oxygen and carbon dioxide content. Honeywell's knowledge of airconditioning as it is applied in office and home is making space flight possible, and I should like to predict that we will learn techniques and gain new knowledge from the space cabin environment that will in turn, lead to an even better indoor climate in our homes and offices."

Dr. Finn J. Larsen

Michelson spoke at a club dinner for the editors principally relating humorous incidents in automatic heating and particularly as they affected its early day individuals. "Mike" stays primarily in New York, masterminds the Company's Eastern markets.

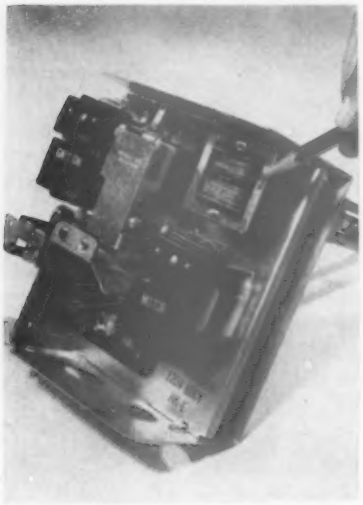
Arnold Michelson

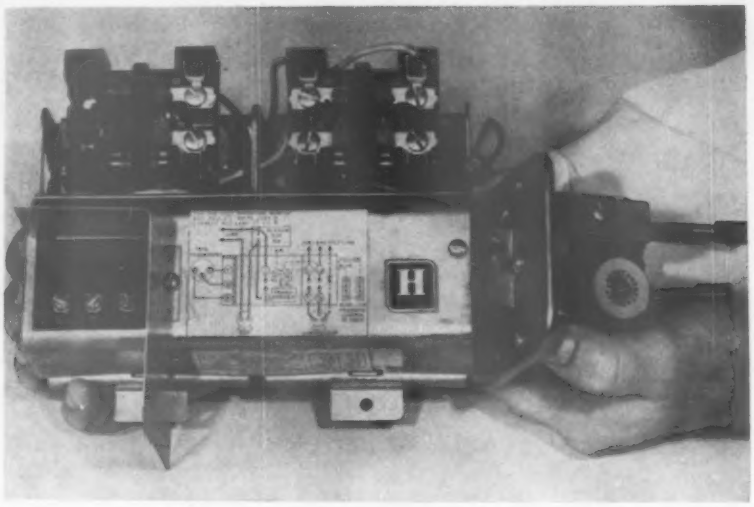
"This job of consumer education is much too big for any one company. In my opinion, it is one that should be undertaken by the entire industry. Airconditioning, hydronic heating, warm air heating, and oil and gas burner manufacturers all have the same common enemy in the apathy of the homeowner toward more comfort. These various trade organizations, all of them highly prejudiced in favor of their own particular interests, might possibly lay aside their product differences and, with a united fund, and in a united overall industry campaign, engage themselves in the project of promoting better heating and cooling, just as the electrical industry has so successfully promoted adequate wiring."

Tom McDonald

"1960 stacks up as a year of promise and opportunity, for the heating and airconditioning industry, unmatched in recent history. It marks the starting point of what should be a golden decade for the heating and cooling industry. Any of these three factors is cause for optimism on our part. When you put all three of them together, I think you'll agree we are entitled to be just a little excited. But it's one thing to be enthused and it's something else to translate your enthusiasm to others so that the end result is action."

K. L. Wilson





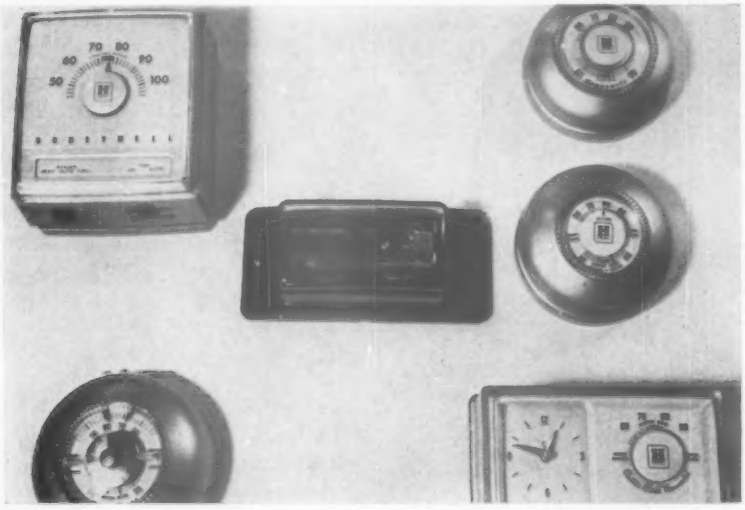
A NEWLY-DESIGNED residential oilburner primary control (above) provides a lower temperature operating control for use in assembled and pre-wired furnaces and boilers. This RA817 Protectorelay operates at temperatures 25 degrees F. below previous models, using a newly-designed transformer and exposed relay coil which dissipates heat more rapidly. Exterior cover is unchanged; motor relay is located in the lower corner below the transformer.

Honeywell has introduced an array of control centers for use with all types of residential two and three-ton central airconditioning systems (upper right). Panels feature a complete system for controlling condenser fan, compressor and evaporator fan. Installation ease is assured through the use of combination screw and quick-connect terminals for line voltage wiring; all components are replaceable in the field. The centers, which may also be used as replacement units, can be installed at different points on the assembly line if the equipment manufacturer so desires.

Two new models have been added to Honeywell's indoor-outdoor residential temperature line (lower left). The new indoor thermostats include an automatic heating-cooling changeover model (above left in the photo) and a semi-automatic day-night switchback Honeywell Round (below left in the photo). Both are used in conjunction with an outdoor thermostat (center in the photo). When outside temperature levels drop, the outdoor thermostat adjusts the control point on the indoor unit upward to provide additional heat in a home even before the occupants are aware of the need. The controls along the right side of the photo are previously introduced models of indoor-outdoor controls.

New hydronic zone valve for residential heating and cooling (lower right) includes a line voltage end switch with snap-on terminals; in many cases this eliminates the need for an auxiliary relay to operate the circulator and burner. Other features include a rust and corrosion-free stainless steel butterfly vane and a sealed-in synchronous low voltage motor.

For information about these products, write Minneapolis-Honeywell, Residential Division, 2747 Fourth Ave. S., Minneapolis 8, Minn.



New Products from Honeywell

Better Utilization and new Uses

Panel Discussion: "Increasing the Demand for fueloil Products"

by W. J. Sweeney*

THE OIL INDUSTRY has been extremely fortunate in having to deal in the main with an energy raw material that is a liquid, that can be pumped through pipes and packaged in relatively simple containers ranging in size from a can of ligther fluid to a 60,000 ton tanker filled with crude oil. It can be processed into products ranging in properties from LPG to asphalt. It is extremely versatile and there should be no end to the diversity of its products and their application.

The ability of the oil industry to continue its expansion, and competition from other forms of energy in markets now using petroleum products makes it important to protect present outlets and find new uses. Our company during the past few years has had a modest research activity devoted to these ends. With your permission we will review frankly a few of the things that have been studied:—some mundane, some really blue-sky.

What can We learn from History?

Back in the 1890's, gasoline was a waste product, disposed of with no profit to the industry or nation. About this time a manufacturing company in Massachusetts developed a machine that carbureted air with light gasoline to produce in the home an illumination gas for domestic use. At that time this machine was the biggest single outlet for gasoline. The Springfield Gas Machine created a new use for gasoline. Later, of course, it was killed off by competition with town gas and electricity. Then, later still, came the automobile. We were pulled partly out of a hole by a stranger, pushed back in by a competitor, and pulled all the way out by another stranger. We should be so lucky!

An outlet for gasoline was wanted by the industry in those days. But, in 1946, there was a market for diesel fuel begging to have assurance that it would be supplied, and the industry hesitated to take it on because of a possible undersupply of middle distillate. The railroads wished to convert to diesels because of overpowering economic advantages. Data were available that one Btu of distillate burned in a diesel locomotive would do the work of 7 to 12 Btu of coal burned in a steam locomotive plus a large saving in investment and maintenance costs. Faced with these economics, it was recognized that nothing could stop dieselization so the railroads were given assurance of supplies even if it meant an encroachment on the other distillate demands.

While the industry was getting used to handling the diesel demand, a worthy competitor was biting into its home heating market. This trend is shown in Figure 1 which shows the percent of different types of home heating units installed each year. Since 1946 the rate of installation of gas heating units has doubled; and, since 1949 the rate for oil units has almost halved. This trend could be due to a number of different causes . . . price of fuel, price of equipment, service, and performance of the heating plant. All of these were studied and I will dwell only on the performance factor. This was the first experimental study that was made under our so-called new uses activity. It happens not to be a new use at all. It was an old one that had not been adequately attended.

The first thing done was to obtain the facts. Efficiency studies were made of the home heating plants of a number of customers. The efficiencies varied over a wide range. Why couldn't they all be as good as the best. Back in the laboratory, burner, firebox and convection systems were studied and three important factors were found:

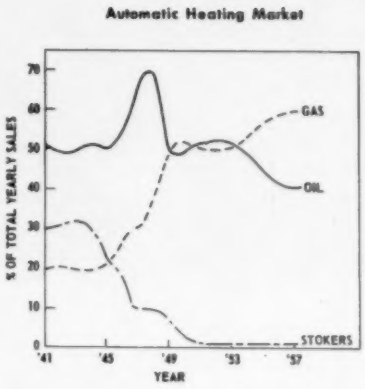


Figure 1

1) Matching firing rate to heating load
2) More turbulent mixing of air and oil
3) Correctly matched oil spray and air patterns

Having learned these things, the research people selected a significant group of home heating plants, modified them and followed their efficiency throughout a winter season. This was so successful that the marketers picked it up and carried out an expanded program the following season. The results are shown in Figure 2. It can be seen that the increase in efficiency corresponded to a fuel saving of about 20% to the consumer. An additional gain is represented in the lower smoke number which means cleaner burning, cleaner furnace condition, less smoke and odor, and less maintenance.

We have new and welcome company in this endeavor, now represented by individual oil concerns and the recently constituted API research project. It seems quite certain that through these concerted industry efforts the heating oil trend will be improved and other areas of the business which can be improved will be discovered.

Sources of new use Ideas

A purer form of new uses study or techniques is one involving the survey of sections of national economies. The

*Vice-president, Esso Research and Engineering Co., Linden, N. J. Other panelists at the symposium, a part of the National Petroleum Association's Atlantic City, September 17 meeting were: Harry L. Moir, vice-president, The Pure Oil Co. and Howard P. Ferguson, manager, Wholesale and Subsidiary Sales, The Standard Oil Co. (Ohio).

steel industry and agriculture are two big ones. Perhaps one of the most promising is the use of more oil in the steel industry. We all are aware of the large energy requirements of the iron making processes. Figure 3 shows the consumption rate of energy in different forms consumed by the steel industry in the U. S. as equivalent barrels of oil. In 1952 oil represented only 11% of the Btu requirement. By 1967 it will still be only 11% unless the steel industry generously tries to find methods of profitably using more oil, or the oil industry through research shows it how,—or, the two industries working together find out how.

New Uses on the Farm

Agriculture was mentioned earlier. In looking for possible uses of oil in agriculture the problem of water conservation presented itself time and time again. There seems to be too much or too little rainfall. And in some places where the average is good, some years it's high and other it's low. Three concepts dealing with water saving were considered. These at the start seemed to be rather "blue sky." They are shown on Figure 4.

The first, on the left, is the water diversion concept which involves asphalt strips which will divert rainfall, thereby increasing the moisture available to each cultivated acre. The second is the reduction of soil moisture losses so seeds can germinate and grow to a strength where they can endure dry conditions during which they would normally perish. This is important in reclamation of abandoned range and farm lands, and in alleviation of dust bowl conditions. The third is for the production of watersheds for municipal, agricultural and industrial water supplies.

Field Tests confirm lab Findings

	Before Changes	Field Tests Research	Field Tests Marketing
No. homes	—	21	128
Abs. Eff'y.—%	64/69	78	78
Smoke No.	4	1.5	1.5
Fuel Savings—%	—	19.4	21.5

Figure 2

Experiments have been run on the first two and rather promising results have been obtained on the second concept, namely, seed germination. In this concept, a thin film of asphalt is spread over seed beds of grass for rangeland reclamation. The film is designed to last at least five to six weeks, time enough for germination and breakthrough. Field tests are being run with considerable interest and help from agricultural people in the western states. The results have so far been very gratifying and we and our friends are very pleased with the progress. Such a technique, if successful, could mean a large asphalt outlet.

How about fuel Cells?

Jumping from the ground into the blue-sky, much has been published in recent months about the fuel cell. This energy-conversion device was conceived by Sir Humphrey Davy over 100 years ago. The concept is thermodynamically sound, but the technical problems have for years seemed insurmountable. In recent years more progress has been made, particularly in fuel cells using hydrogen as the fuel and oxygen as the oxidizer. Such a cell is the recently publicized one of Francis Bacon of England. The overall concept is the same, whether the fuel be hydrogen, oil, gas or coal. A very simple diagram of a cell is indicated in Figure 5.

Instead of burning the fuel with air to obtain heat, and using the heat to obtain steam, and expanding the steam to make power, and converting the power to electricity at a maximum efficiency of about 40%,—it is theoretically possible in a fuel cell to convert the chemical energy of oil directly into electricity without going through the heat step. The overall chemical reaction is the same in a fuel cell as it is in combustion, but the products of the oxidation, CO_2 and water will have to be stripped out of the liquid electrolyte. Hydrogen fuel

Fuels Consumption in U. S. Steel Industry

Year	1952	1967**
Capacity—MM Tons Steel	110	160
Primary Fuels—MM Bbls.*		
Coal	346	520
Oil	53	80
Gas (Natural)	35	52
Electricity	38	57
Totals	472	709

*Expressed as barrels of fueloil equivalent.

**Assumes no change in technology.

Figure 3

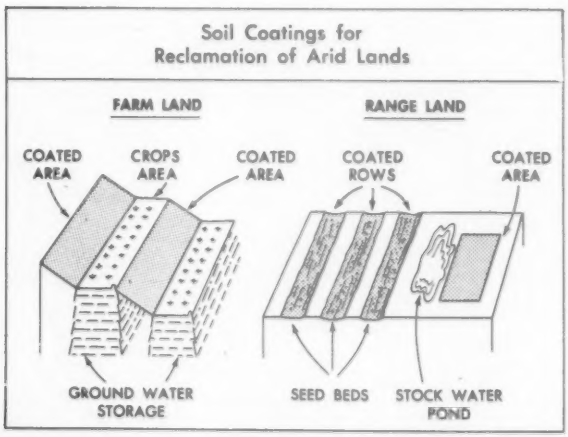


Figure 4

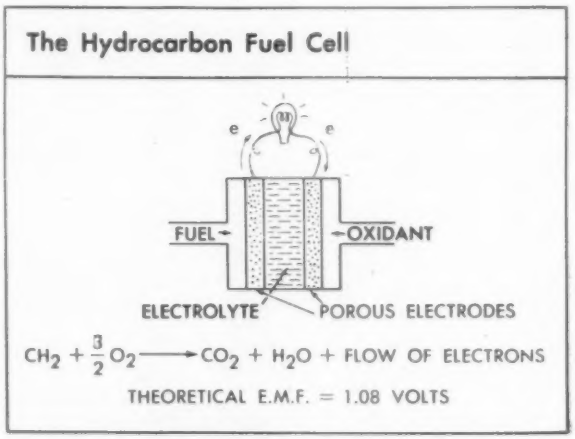


Figure 5

cells are now reasonably efficient, but hydrogen is an expensive fuel compared to oil, gas or coal. Can it be made to work on oil and what would it mean to the oil business?

Can work on Hydrocarbons

Our research people have been experimenting on hydrocarbon fuel cells for some time now. The cells that they have are not at all practical. On the other hand, they have good experimental evidence that certain hydrocarbons, with specially prepared electrodes, will react in conjunction with a suitably prepared oxygen electrode to produce electricity in true fuel cell fashion. The development of a practical hydrocarbon fuel cell is going to be a long tedious job. But whose business is it,—if it is ultimately to be an energy-consuming device, —to see that it is first developed on oil rather than some competitive energy?

It is a little early to conjecture how a successful cell will be used and whether it would increase or decrease the use of oil. However, our more imaginative research people look forward to the day when they might use their present heating oil tank to feed a fuel cell instead of a furnace and generate thereby all the electrical power needed . . . run their lights, kitchen and laundry equipment and operate a heat pump to keep them warm in winter and cool in summer.

New Uses from passed-over Ideas

A wide spectrum of things can be studied in any new uses activity. The fact that oil can be burned under water engaged the interest of the people working in this area. How could you use the trick of burning oil under water? One characteristic is a terrific rate of heat transfer to the water itself. Why not put a water tank on a truck, burn oil underneath the surface of the water, drop in snow, melt it, and pour the melt into an available sewer rather than cart the snow across the city to the harbor?

After some effort this concept was proved to be feasible and practical, particularly in a stationary form. A picture of such an operating snow melter is shown in Figure 6.

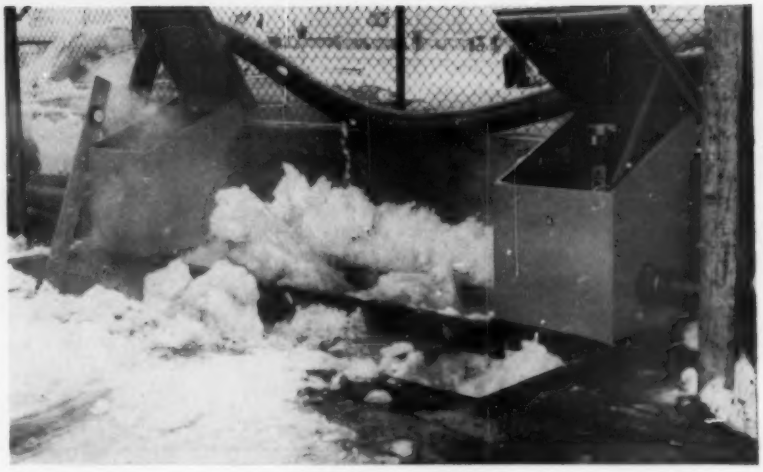


Figure 6

Our people have studied a number of other things which are only marginally promising because of technical problems or because the big use is not there.

Oilfired airconditioning is a new application that would have two big advantages. One, of course, is the sale of oil in the summer to a new market. The other is the increased versatility of oil to both heat and cool which could increase its acceptance. The laboratories have successfully fired one airconditioner and are working on another.

The diesel driven heat pump has been studied. Again it was technically successful, but the high investment plus the servicing problem make this device of marginal interest, in spite of the lower fuel costs which would result.

Using oil fogs for frost protection is another idea that has been studied. On paper it is sound, and it does work in the field. Oil fogs of 4 to 8 micron particles will block heat radiated from the earth and thus prevent frost. Yet we lack a practical machine to put up these fogs and the petroleum industry incentive seems to be too small to undertake developing such a machine.

Establishing new outlets for oil is like developing a whole series of new businesses. It takes imagination, sound economic thinking, painstaking experiment, and risk capital. In our work, at its present state, we are giving imagination and paper studies free rein while holding tightly on the halter of experimental expense. We have had some promising minor developments and hope for bigger ones.

Conclusions

As a summary, I'd like to deal not with the studies we have made but with the conclusions they suggest.

First, there always has been competition between various forms of energy and there always will be. This competition is in the field of old products as well as new. So the competition and what it can do must continually be watched.

Second, more than we realize our markets in the past have been handed to us by inventors of oil consuming devices. We must help improve these devices to make them as efficient as possible so they can stand up against the competition of devices that use other forms of energy to do the same job for the consumer.

Third, we should aid and abet the invention and development of new oil consuming devices both those conceived by others and those invented by ourselves.

Fourth, we should depend more on ourselves than we have in the past to find new uses for oil, and recognize that this is no easy task and will require both joint and individual effort and expense to be effective.

And finally, other industries like the chemical, electrical, pharmaceutical, aviation are doing this all the time and successfully, too; and there is no reason why we can't do it better.

What carries the Product?

A Study of delivery and service Trucks by Size, Brand and Age

DURING March 1959, requests were mailed to 1,000 fueloil distributors asking their help in a fueloil truck study.

Five states were chosen for the mailing, each representative of a broad marketing area for fueloil.

The names represented a random selection, taking from the FUELOIL & OIL HEAT's Addressograph files, every fifth plate starting at A. If the plate was for a major oil company (Esso, Shell, etc.) it was not used. If it was for an individual without company connection, it was passed over and the next chosen.

Thus all plates used were for independent fueloil distributing companies.

The response was good, a 39% return.

Response to Sample Mailing

	Requests Mailed	*Returns Received*	*Percent Return*
Massachusetts	290	109	38%
New Jersey	253	99	39
Wisconsin	133	51	38
Indiana	172	56	33
Washington	152	73	48
	1,000	388	39%

These Companies feature Fueloil

PETROLEUM SALES OF PARTICIPANTS
SHOWN AS PERCENT OF COMBINED VOLUME

	Fueloil	*Gasoline*
Massachusetts	95%	5%
New Jersey	95	5
Wisconsin	72	28
Indiana	73	27
Washington	91	9
Five States	88%	12%

While the mailing was not in any way influenced by the characteristics of a company's sales, it is understandable that the magazine's subscribers have stronger fueloil than gasoline interests.

The percentages show that in Eastern and Western states gasoline is of small interest to the fueloil distributor. In the Midwest it carries more weight but he's still primarily a fueloil merchant.

That would not be true of major oil companies, but they were not asked to participate.

Fueloil Trucks Operating 1959

NUMBER AND PERCENT OF BRAND PREFERENCE BY STATES

	Mass.		*N. J.*		*Wis.*		*Ind.*		*Wash.*		*Five States*	
Brand	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*
A	212	33	71	17	65	26	83	32	121	30	552	28
B	63	10	33	8	52	21	56	21	105	26	309	16
C	75	12	70	17	45	18	55	21	51	13	296	15
D	150	24	51	12	12	5	14	5	30	8	257	13
E	38	6	58	14	31	13	17	6	43	11	187	10
F	30	5	62	15	20	8	26	10	18	5	156	8
G	30	5	31	7	6	2	..	..	9	2	76	4
H	23	4	16	4	..	..	..	..	..	..	39	2
Others	14	1	23	6	15	7	12	5	23	5	87	4
Total	635	100	415	100	246	100	263	100	400	100	1959	100

State variations in brand preferences are often significant. One truck will enjoy an acceptance in a region considerably at variance with its position in others.

Fueloil Trucks Operating 1959

BRANDS AND YEAR PURCHASED
SHOWN AS PERCENT OF TOTAL BOUGHT IN EACH YEAR

	Before 1950	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*	*1957*	*1958*	*1959*	*% of Total in Use*
A	20%	20%	24%	17%	33%	31%	26%	31%	27%	24%	35%	28%
B	12	17	17	10	12	8	13	14	19	8	21	16
C	19	22	17	19	10	16	10	14	14	24	10	15
D	13	10	13	10	8	12	16	12	11	9	6	13
E	8	13	7	13	17	8	22	8	9	8	12	10
F	13	10	10	16	10	11	11	15	9	8	4	8
G	5	3	3	8	3	2	1	1	8	12	7	4
H	4	2	3	3	1	1	1	..	..	3	1	2
Others	6	3	6	4	6	11	..	5	3	4	4	4
Average All Brands	19%	9%	9%	6%	7%	8%	10%	12%	10%	7%	3%	100%

Many fueloil trucks have a long life. Notice that 19% of those now in use were bought before 1950; 20% were bought in 1957 and 1958, plus two months of 1959. The grandfather of the lot was a Federal 1927, followed by a 1928 Mack. Then an International 1938 and a Mack 1939 completed the pre-war roster.

Fueloil Trucks Operating 1959

IN PERCENTAGE BY CAPACITIES

	Under 1000 Gal.	*1000 to 1499*	*1500 to 1999*	*2000 to 2499*	*2500 Gal. & up*	*Total trucks operating*
A	8%	33%	34%	14%	11%	552
B	13	52	27	7	1	309
C	4	27	38	18	13	296
D	1	1	23	36	39	257
E	4	27	29	29	11	187
F	7	30	35	20	8	156
G	1	8	19	20	37	76
H	..	6	6	41	47	39
Others	1	21	36	18	24	87
All Brands	6%	28%	31%	19%	16%	1959

There is a significant variation in truck capacities by brands. The largest single category is the 1500 to 1999 size, with 1000 to 1499 the next most popular size. As an interesting coincidence, this 1959 survey turned up exactly 1959 fueloil trucks, operated by 388 companies, which figures out to an average of 5.04 each.

Oilheating Service Trucks operating 1959

NUMBER OF TRUCKS BY YEAR PURCHASED

	Before 1950	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*	*1957*	*1958*	*Two Months 1959*
Massachusetts	37	21	17	18	23	40	33	36	33	53	7
New Jersey	41	21	20	19	24	28	41	26	26	33	7
Wisconsin	12	4	5	23	6	11	13	9	9	12	1
Indiana	10	14	2	10	7	7	5	16	1	5	1
Washington	21	15	11	7	7	12	24	20	9	17	2
Total	121	75	55	77	67	98	116	107	78	120	18

Trends of Truck Sizes by Years Purchased
In Percent of All Sizes

	OPERATING 1959										
	Before 1950	1950	1951	1952	1953	1954	1955	1956	1957	1958	Total in use 1959
Massachusetts											
Under 1000	7	5	2	..	2	..	3	..	2	..	2
1000-1499	32	27	16	25	22	17	16	8	7	11	18
1500-1999	19	33	36	10	24	17	25	17	15	14	20
2000-2499	35	35	37	30	36	21	23	24	20	22	29
2500-over	7	..	9	35	16	45	33	51	56	53	31
	100	100	100	100	100	100	100	100	100	100	100
New Jersey											
Under 1000	6	6	2	..	..	..	..	4	..	..	3
1000-1499	41	44	20	28	24	16	13	10	6	4	23
1500-1999	21	38	33	50	35	29	29	26	25	27	29
2000-2499	20	9	35	11	35	39	37	40	30	19	27
2500-over	12	3	10	11	6	16	21	20	39	50	18
	100	100	100	100	100	100	100	100	100	100	100
Wisconsin											
Under 1000	45	18	17	16	31	15	3	14	12	6	16
1000-1499	26	46	22	42	54	35	33	18	14	17	30
1500-1999	16	21	33	42	8	30	36	36	51	39	33
2000-2499	10	15	22	..	7	20	18	18	20	6	15
2500-over	3	..	6	..	..	..	..	14	3	32	6
	100	100	100	100	100	100	100	100	100	100	100
Indiana											
Under 1000	23	4	7	5	..	..	3	..	..	..	4
1000-1499	35	40	37	27	33	30	27	34	17	11	30
1500-1999	32	56	49	45	67	65	34	33	38	22	42
2000-2499	5	..	..	9	..	5	18	15	28	56	14
2500-over	45	..	7	14	..	..	18	18	17	11	10
	100	100	100	100	100	100	100	100	100	100	100
Washington											
Under 1000	20	4	..	4	6	10	4	..	3	..	7
1000-1499	58	70	68	55	55	57	38	50	76	50	59
1500-1999	15	22	26	41	25	33	43	42	15	33	27
2000-2499	4	2	3	..	3	..	11	3	3	..	3
2500-over	4	2	3	..	11	..	4	5	3	17	4
	100	100	100	100	100	100	100	100	100	100	100

Service Trucks by Brands in use 1959

	B	A	F	E	I	C	J	Others	Total
Massachusetts	99	108	17	18	41	17	7	11	318
New Jersey	106	82	40	19	7	18	8	6	286
Wisconsin	41	37	13	1	..	9	2	..	105
Indiana	28	21	7	10	1	8	2	3	78
Washington	57	35	15	16	12	8	1	1	145
Five States	331	283	92	64	61	60	20	21	932

The brand preferences for oilheating service trucks are not necessarily the same as for fueloil trucks among the 388 participating companies.

Oilheating Service Trucks
Operated by Fueloil Distributors 1959

	BRAND PERCENT OF TOTAL, BY AGES											
	Before 1950	1950	1951	1952	1953	1954	1955	1956	1957	1958	Two Mo. 1959	Total operating 1959
B	31	40	37	51	37	40	48	37	31	16	11	36
A	24	28	39	18	34	17	34	41	39	40	26	31
F	12	13	9	15	6	18	7	8	9	7	47	11
E	10	7	6	4	10	11	5	7	10	4	3	7
I	..	..	..	..	..	..	..	..	1	20	3	3
C	16	6	3	8	9	8	4	7	5	2	..	7
J	7	2	..	..	..	2	2	..	2	4	5	2
Others	..	4	6	4	4	4	..	..	3	7	5	3
All Brands	13	8	6	10	7	10	12	11	8	12	3	100

Oilheating service trucks also average considerable length of life. Notice that 13% of those operating in 1959 were bought before 1950.

Size Trends in Fueloil Trucks Operating 1959

(IN GALLONS TANK CAPACITY)

	Bought Before 1950	Bought 1954	Bought 1958
Massachusetts	1769	2220	2335
New Jersey	1708	2025	2325
Wisconsin	1273	1533	1955
Indiana	1432	1625	2085
Washington	1325	1370	1670
Five States	1575	1865	2164

Here we show average truck capacities at three points in the study. Notice the important differences by states. However, in all areas the distributors are buying trucks of ever increasing capacity, year by year. The trucks bought in 1958 reflect their current thinking on what's best.

Oilheating Service Trucks by Body Types

	IN OPERATION, 1959	
	Panel	Open
Massachusetts	64%	36%
New Jersey	75	25
Wisconsin	56	44
Indiana	50	50
Washington	63	37
Five States	65%	35%

Open body trucks are often better for the delivery and installation of new oilheating jobs. However, servicing of existing equipment is the larger operation. For this, the panel body is liked.

78% of the Fueloil Distributors operate oilheating Service Trucks

	Companies	Service Trucks
Massachusetts	90	318
New Jersey	90	286
Wisconsin	31	78
Indiana	32	105
Washington	61	145
	304	932

An ever-growing share of oilheating service is done by fueloil distributors.

Truck Fleets with one Brand

	Percent of All Companies	Size of Fleet
A	11%	3.3 Trucks
B	5	3.3
C	4	3.9
F	3	2.9
D	2	2.9
E	2	3.6
Percent of Companies using one brand	27%	3.9 Trucks

More than a fourth of the companies use only one brand of truck in their fleets. In general, they average smaller numbers of trucks since several had only two trucks. Single truck operators were, of course, not included here.

For obvious reasons we have not listed the brand names of the trucks. Instead each has been indicated with a code letter. However, any responsible marketing company who needs the information can get the key by writing to the editor.

This pressure type sandblaster removes rust and scale from rough castings.

Cleaning for better Rebuilding

FROM THE EMPHASIS put on cleaning defective oilburner parts before they are rebuilt, it's not hard to believe that cleanliness is next to Godliness at Sid Harvey's in Valley Stream, N. Y.

The photographs on this page show some of the cleaning activity that precedes the rebuilding of parts. It begins with the disassembly of each part with power tools (above) and then follows through the various cleaning processes.

A unique and most effective recent addition is an ultra sonic cleaning device that is not only fascinating to watch but almost amazing to see the thorough job it does removing lapping compound from seals.

Herb Lindveit, Harvey's methods engineer, explains that all the time and care taken to clean defective parts is money well spent if the part is to be restored to a good-as-new condition.

For example, he points out that the part will work better and longer if there is small chance of dirt, scale, carbon or rust interfering with operation in the field.

In addition, modern machines and methods clean better at lower cost and an improved appearance of the rebuilt part means better homeowner acceptance.

As the pictures show Harvey uses sandblasting, ultra sonic cleaning, tumbling and degreasing methods, depending upon the part being handled.

Giant rinsing machine with powerful jet sprays completes the cleaning cycle.

Liquid tumbling thoroughly cleans pump bearings, as well as delicate parts.

Centrifugal driers heat, dry and remove residue on even the smallest part.

Ultra sonic cleaning device removes lapping compound from seal faces.

Oil Daily lists 100 Ways to expand fueloil Demand

The Oil Daily has been promoting a theme of "Help expand oil demand," and in its September 17 edition reproduced the following suggestions for fueloil people. Most of them are well-known to oilheating men, but the significant thing is that a daily newspaper serving the oil industry has taken the trouble to have one of its reporters interview enough operators to put together 100 constructive points on ways to improve the business.

The Oil Daily subtitled its presentation, "Oil heat is automatic heat, safe — economical — dependable — convenient."

Distributors—

Start selling oil heat, not just delivering oil.

Push oil heat in all new construction.

Watch for construction projects. Hundreds of shopping centers are being built. Homes, schools and churches follow soon after.

Many distributors are going into heating installations.

Sell year-round comfortable living.

• •

Advertising, Types—

Television spots
Radio spots
Local newspapers
Billboards
Direct mail pieces
Supermarket paper sacks
Shopping bags
Movie films
Calendars
Transit car and bus cards
Delivery trucks with painted message
Paint fueloil trucks differently
Door-to-door canvass with sales helps
Telephone sales calls
Cards in community publications

• •

Advertising, Message—

Make sure company name, address and telephone are prominently displayed.

Stress—

Supplies stored locally in large quantities.

Choice of supplier by consumer.

Uninterruptible supplies.

Flexible supply pattern, with hundreds of U. S. refineries accessible.

Hundreds of other primary supply points available.

Supplies transported by tankers, barges, transport trucks and railroad tank cars as well as by pipelines.

Seasonal requirements can be stored on the premises.

Supply always available, no curtailment in severe cold spells.

Safe under all reasonable conditions of storage and use.

Fully automatic.

Heating efficiency high; 80% with modern units.

Cleanliness—burns completely without odor under normal conditions.

Service available at all hours.

Economical to use.

• •

Types of oilburning equipment—

Central heating units for warm air, steam or hot water systems.

Water heaters.
Space heaters.
Floor furnaces.
Incinerators.
Airconditioning.
Cooking stoves.

• •

Comfort, Convenience, Economy—

No homeowner tending needed.

Set thermostat sufficiently high—forget it.

Let furnace run 24 hours during cold spells.

Turn down thermostat at night in milder weather.

• •

Build Company Prestige—

Put men in attractive uniforms—keep them clean.

Clean up distribution plants and offices.

Train personnel to have respect for homes, lawns, etc.

Keep trucks and service vehicles in neat condition.

• •

Industry Activity—

National, state and local—or by dealer associations at all levels.

Improve oilburners.

Increase efficiency of burning equipment.

Simplify burners for more efficient servicing.

Make burning equipment easier for fast repairs.

Keep standards for oilburners and equipment in line with needs.

Adopt some kind of industry supervision of oilburner installations.

Cooperate with manufacturers of furnaces.

Exhibit oilburners at home expositions.

Participate in shows sponsored by home builders.

Take space in permanent exhibits, such as that in New York Architects Building.

Exhibit at state fairs for farm trade.

Encourage "Ideal Home" Shows.

Stress that the ideal home is oilheated.

Make sure all city ordinances meet the needs of oilheating installations.

Be on guard against fire regulations that discriminate against oilheating.

Check building codes and inspection rules to see that provisions for oilheating installations are included.

Be alert for traffic regulations that discriminate against fueloil tank trucks.

Improve burning oils by
Using additives
Reducing gum and residues
Removing odors
Assuring consistent quality

• •

Services to Customers—

Install budget plan for year-round payment.

Insurance for budget plan payments.

Provide prompt, efficient burner service.

Send personnel to service training schools.

Sell service contract to customers.

Advise customers on need for annual inspection.

Check all equipment to assure best operating condition.

List all types of heating installations served and work out testing program.

Burner service is a "must" for progressive distributor.

If burner service not provided, keep list of available servicemen for customers to contact.

Schedule deliveries according to degree-day system.

Modernize delivery methods.

Streamline office technique for prompt handling of customer calls.

• •

Farm Installations—

Oil company delivering gasoline has best opening to sell central oilheating.

Upgrade space heating installations.

No competing fuel in oil's price class available in most rural areas.

Enclose oilheating sales brochures with monthly bills.

Recommend reliable firm for oilheating installation, if such service not provided.

Arrange for heating contractor or other service agency to handle customer calls, if burner service not provided.

Expand existing contracts with farmers for tobacco curing to include home heating.

Sell oil heat for drying of hay, beans and other crops.

Oilheated home just as important as a smudge pot for citrus grove in cold spell.

Selling oilheating for maple-sugar evaporation is opener for home heating installation.

Exhibit at county fairs, stressing advantages of central oilheating for farm homes.

Oilfired hot water for dairying.

Radiant heat in concrete floors of hog farrowing houses.

• •

New Uses—

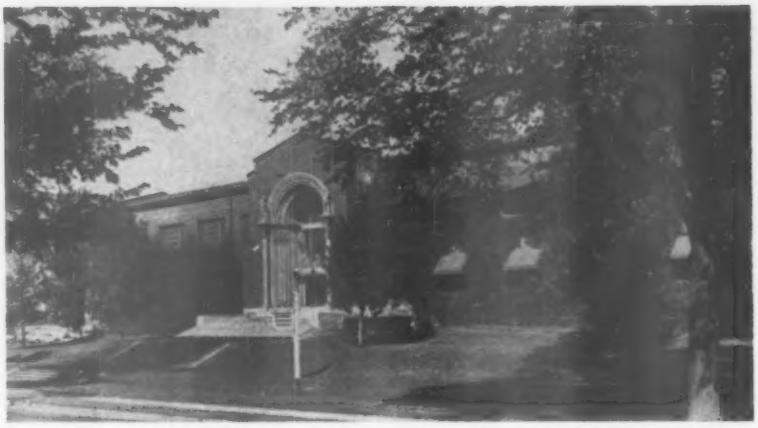
Keeping airport landing strips free of snow and ice by heating water for circulation in buried pipes.

Melting snow, scooped off of parking lots.

Heating outdoor movies, with one burner per 30 cars.

Snow-free sidewalks with radiant heat.

Dunwoody Institute, Minneapolis, runs service Schools for NWPA



OILHEATING service schools are nothing new, but sometimes they have an unusual slant or emphasis. The schools range from the very short few-days type to some running two years and upward for real professionals. The particular point of interest in the sessions being conducted by the Dunwoody Industrial Institute, Minneapolis, for the Northwest Petroleum Association is that the students are all employees of either major oil companies or independent petroleum jobbers of the Minnesota-Dakota area.

That particular portion of the U. S. has in past years shown rather little interest by oil men in the problems and skills of servicing oilheating equipment. Many speakers at the NWPA conventions have urged oil men to handle their own service, or at least take full responsibility for it to the customer. This position becomes increasingly critical as natural gas competition moves into an area, but until very recently not much interest could be raised to add this responsibility.

But these short courses at Dunwoody Institute running in August and September were eye-openers because the registration each time was swamped, and extra courses had to be provided after the regular schedule was run. All students were required to be employees of association members, which means oil companies.

The courses were short, three days each, and in the period of August 10 through September 18, there were eight courses accommodating 128 men. The intent is to limit each group to 15 men. The fee is $35 for the course. The announced purpose is "to teach the fundamental phases of servicing vaporizing and high pressure gun oilburners."

Since only 10% of the students are local, living arrangements can be had at the YMCA within walking distance, and meals in the school cafeteria.

The printed outline of the course is quite ambitious, covering some 40 specific items to be explored. This is naturally in a preliminary or get-acquainted manner, but nonetheless the men will be introduced to oilheating in a way that will give them confidence to handle the more routine daily needs. The logical outcome should be that these men gain enough interest to want more thorough training for the tougher jobs. In any event it's a real break-through for the oil men of this region to take a direct service interest.

H. F. Horning is executive secretary of the Northwest Petroleum Association. He gives credit for the school project to Fred Meyer, who conceived the idea, plus Ed Jarnig, Howard Schampel and John Mitchell, who worked out the curriculum. These are followed by Chester Schmidt of Indiana Standard, Robert Holmes of Mobil Oil, John Palinka of Pure Oil, Frank Mahler of Phillips and Robert Hartmann of Shell Oil. As a group they conduct the closing sessions on the final half day.

GSA Study evaluates Influence of Airconditioning on Production

A five-month study during the summer of 1957 by the Office of Buildings Management, General Services Administration, in cooperation with another Government agency, indicates that the work output of employees in an airconditioned space is greater than that of employees in a similar space which is not airconditioned.

Now that airconditioning has come to be regarded as a necessity by the public in general, building owners find themselves in the position of being forced to provide airconditioned space in order to hold their tenants.

Industry, searching for some way to justify the great expense of airconditioning, has tried to find proof that it increases both work production and accuracy, and that there is less absenteeism.

Numerous reports have appeared in technical papers, giving accounts of tests in which airconditioning is said to have increased productivity as much as 50%, but when these reports are more carefully analyzed it is generally found that other environmental changes (such as painting, providing higher light intensity and acoustical treatment, etc.) were made at the same time airconditioning was installed. It is, therefore, considered fallacious to credit airconditioning with all the claimed benefits. This reasoning is in accord with the Hawthorne Report (published in 1927, and based upon exhaustive research) which showed, surprising as it might seem, that any change in working conditions, whether for better or worse, results in increased work production for at least a time.

Despite the great number of buildings under our supervision and the wide variety of work performed in them, we were, until recently, unable to find an activity suitable for testing the effects of airconditioning—one in which the same work is performed year after year, and where employee work output can be evaluated with some degree of accuracy.

Late in 1955, however, we found an operation in one of the Government departments which we believed filled these requirements. The work performed there has not varied through the years. It consists of making great numbers of so-called "searches" (more than 100,000 each month), and each employee must complete a minimum quota.

The department not only gave consent to the test, but cooperated to the fullest by collecting the extensive data required.

The building in which the test was conducted is a wing-type structure, with the head house in the center. The wings were of open construction, without definite corridors.

The west wing was selected as the test area, and the center wing as the control area. Both were principally occupied by file cabinets where the searches are performed.

All space was heated by direct radiation from radiators under the windows. Ventilation depended on opening the windows, which had all the usual disadvantages.

The lighting intensity was 4.3 watts per square foot, furnished by 500-watt semi-indirect incandescent luminaires. The walls were painted "Government buff."

It was intended to study for a two-year period the effect of airconditioning on production. Only insignificant environmental changes were to be made in the test and control areas during this phase of the study.

Under the plan, existing lighting and painting conditions in both areas were changed. Identical painting and lighting were provided so that, with the exception of airconditioning in the test area, all employees would be working under the same conditions.

The walls were painted a flat light green, and the ceilings flat white. The lighting fixtures were changed from semi-indirect incandescent to semi-indirect fluorescent.

The airconditioning system installed for the test area was operated to hold a uniform temperature of 75° F. (± 2°), and a relative humidity of not in excess of 50%.

The cooled and dehumidified primary (outside) air was supplied by an overhead supply duct, running approximately the full length of the wing, with a sidewall outlet per bay discharging toward the windows. The sensible cooling or heating was accomplished by fan coil units located under each window. These units were supplied with chilled or hot water, depending on the season.

To assure a true comparison between the effects of airconditioning on the productivity of the two test groups, only employees who were thoroughly experienced were selected to work on these test teams.

Each of the participating teams consisted of 70 persons, or 140 in all. The average age of the employees working in the airconditioned area was 21.25 years, varying between 18 and 33, while the average age of those in the nonairconditioned space was 21.51 years, ranging between 19 and 32. An equal number of men and women participated on each team.

The testing period covered five months (May through September 1957). During this time, due to marriage, military leave, promotions, reassignments, etc., the average number of employees in the test area dropped from 70 to 62.6, and in the control area to 62.2.

The Office of Buildings Management, which is responsible for operating and maintaining the building, undertook the general coordination of the project and furnished the engineering, installed the new luminaires, and painted the areas.

The occupying agency collected the statistics on work rates, number of errors, and absenteeism.

Results of Study

a. Increased Work Production:

Does airconditioning increase work production? The answer to this most important question definitely is "yes."

How much is the increase? On this point the study was not completely conclusive. Buildings Management had

(*Please turn to page* 124)

South Bend, Ind.

OILHEATING MARKET REPORT

CENTERING around South Bend, Ind., six counties in Indiana and two in southwestern Michigan comprise the oilheating market examined in this report. The Indiana counties are: Elkhart, Kosciusko, LaPorte, Marshall, St. Joseph and Starke. The two Michigan counties are Berrien and Cass. Covering almost 4,000-square miles in land area, this forms one of the nation's principal trading centers.

Industry is highly diversified—in the South Bend-Mishawaka heart section there are nearly 400 plants, embracing 18 of the federal government's 19 standard industrial classifications.

The growth of population has been steady, and substantial since 1950. From a total of 588,017 for the eight counties then, the population has grown today to 700,505, an increase of 19%. In the South Bend-Mishawaka center the increase has been somewhat less, or about 11%.

The South Bend metropolitan area's 1957 effective buying income per family was $7,241, 25.3% higher than the U. S. average.

Home heating Characteristics

Fueloil ration permits for the year 1945 offer an early record of oilheating installations in the eight-county area. In that year 5,846 permits were issued for central heating systems, 10,095 for non-central, or space heating.

The 1950 census provides the next chronological measurement of fuel usage, for both central and non-central systems. The popularity of the three principal house-heating fuels, from this statistical reference, is shown, together with our estimate of the fuel usage picture today, in the table.

These heating usage estimates are for all heating installations in the area. Some (about 5%) are in multiple dwelling units, but in the case of oilheating systems, we consider the figures to be about right for the actual number of domestic-type systems in residential operation. Hence they represent active home consumer accounts for No. 2 and No. 1 fueloil.

Coal, we see, has declined in use since 1950 by a considerable margin. Homes now heated with this fuel are little more than one-third the number using coal in 1950—the actual decline comes to 64%.

Besides the 67,591 centrally-installed oilburners indicated, there are, we believe, another 9,217 in use, burning No. 2 fueloil, in small commercial establishments. This brings to 76,808 the total of all domestic-type, centrally-installed oilburners in this eight-county area.

Competitive Fuels and Costs

The dominant variety of solid fuel for househeating is Pocahontas Lump, a bituminous coal of around 13,500 Btu per pound. This sold, at the time of this study, for $22.25 per ton, so its cost, per therm, works out to 8.4¢. (In making fuel cost comparisons with oil or gas, assuming modern equipment in any case, it should be remembered that the efficiency of use is generally calculated as being lower in bituminous coal, or somewhere around 81% of that attained with oil or gas.) The highest quality coals for stoker use are eastern Kentucky varieties, selling at $19.75 per ton, or the per therm cost equivalent (at 13,500 Btu per pound) of 7.3¢.

Natural gas has long been available in this area and is distributed generally throughout this particular eight-county market. The fuel, of 1,000 Btu per cubic foot, is supplied by the Northern Indiana Public Service Company. A separate utility, the Indiana-Michigan Electric Company, provides electric service.

The gas rate reaches, in its lowest step, a price of 8.5¢ per Ccf (for quantities over 6,000 cubic feet.) Under these rates, a typical consumption for househeating of 168,000 cubic feet (1,680 therms) would cost $162.09. This is an average cost, per therm, of 9.6¢. In the event that gas is already used for cooking and water heating (about 25 therms per month) the house-heating consumption would start at slightly lower brackets and would cost, for the same 168,000 cubic feet, $155.13—an average, per therm, of 9.2¢.

With No. 2 fueloil priced at 15.3¢ per gallon, tank wagon, such low rates for gas make for a rather rough competitive picture for oilheating. To furnish the same 1,680 therms of heat value as in the example for gas would require 1,200 gallons of heating oil, at a total cost of $183.60. The per therm equivalent is 10.9¢.

Fueloil Distribution

Our estimate of the total fueloil volume in this eight-county market is 82,600,000 gallons of No. 2 fueloil sold for residential central heating, another 28,855,000 gallons for central heating in small commercial establishments—a total of 111,455,000 gallons. There are, additionally, about 23,320,000 gallons of No. 1 or kerosene.

Most of this gallonage (77%) is brought into the market by major oil companies; the balance is furnished by independent wholesale suppliers, small refiners, or through brokers.

The major companies also sell the largest share of heating oils at the retail level (about 43%); the independent wholesalers another 19%. The second most important slice of the retail market is held by the independent dealer-distributors, who account for 38% of the retail market.

Among the independent dealers, about one in seven buys "under the fill." These marketers, with no bulk storage facilities of their own, account for approximately 13% of the retail market gallonage.

A bit better than two-thirds (67%) of the fueloil customers in this area are served on a "keep-filled," or automatic delivery basis. About 21% of all users pay for their heating oil requirements under some "budget" arrangement. The use of audible-type tank-fill signals is fairly well established; somewhere around 14% of customers' tanks, it is estimated, are equipped with VENTALARM signals.

One in three (34%) of the fueloil dealers also markets gasoline. About one in four (26%) sells coal in addition to heating oil. Only one in ten of the fueloil companies is active in the sale of oilheating equipment.

Market Concentration

Best estimates list a total of 70 independent fueloil companies in the three counties of St. Joseph, Elkhart and LaPorte. In this group it is estimated that the average number of delivery trucks operated, per firm, is four, for a total of 280 trucks working in that territory. Probably another 150 trucks should be added to this; bringing in the smaller dealers, a truer average number of trucks operated per fueloil dealer would come closer to 2.5.

Oilheating equipment Sales

Of all oilburners installed during 1958, it is estimated that about 15% were sold by the fueloil dealers.

There is some belief among the oilmen that oilburner selling activity is increasing among the heating oil dealers.

Oilburner Service

Equipment servicing stacks up in about the same way, with the fueloil companies handling about the same share, or even slightly less, of the market's total service needs. The plumbing and heating companies and burner service firms, again, share about equally in the principal remaining service responsibility.

Here, though, there is a stronger opinion among the oilmen that the fueloil companies are stepping up their facilities for providing all-around equipment service—five out of six felt this was the case.

Service contracts are not universally offered by fueloil dealers. The prices charged for the typical contracts vary widely, too. In the case of the coverage providing for parts replacement the prices quoted run from $12 to $50. The lower quote obviously denotes ignorance of the provisions of this kind of contract. The higher quote also bears this out, in the unrealistically heavy charge stipulated. A median, practical price for this type contract seems to be about $28. For the contract not including parts replacement, the average price runs around $20. For annual clean-up jobs, costs are in the neighborhood of $13. The fueloil companies who provide service charge less than non-fueloil companies, or around $5.60 per call (minimum hour), against $7 by the latter.

Advertising Promotion

Among the major suppliers there has been some record of oilheat advertising over company signatures. The consensus among local oilmen was that this promotion has been fairly substantial in extent but that the emphasis is usually weighted, about 85 to 15 in favor of companies' particular products over feature treatment of oilheat itself.

About 47%, or nearly half, of the independent marketers promote oilheat in individual company advertising. The typical dealer will spend, in these messages in various media such as newspapers, billboards, radio, direct mail, about 95¢ per year per existing fueloil account. Figured another way, it is estimated this amounts to about ½% of total sales revenue.

	1950			1958		
	Central Heating	*Non-Central Heating*	*Total*	*Central Heating*	*Non-Central Heating*	*Total*
Coal	86,415	22,130	108,545	31,873	7,364	39,237
Gas	4,535	1,355	5,890	48,371	8,583	56,954
Oil	21,080	26,000	47,080	67,591	25,570	93,161
Other	3,635	5,810	9,445	12,333	3,659	15,992
Totals	115,665	55,295	170,960	160,168	45,176	205,344

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Modern Oilheating for Schools

Part 3—Two factors govern heating Costs: 1—Efficiency; 2—Number of Btu's obtained for each cent spent on Fuel

by Jean L. Dupuis

Developments so far, in The Battle of Fuels, prove that the oil heat men in many cities and towns simply do not know how well they can do, when they really try, at fighting electric heat in the realm of new schools. In many actual instances on record, local men selling fueloil and oilheating equipment made no appearances before school board members, architects and engineers, when these men were considering oil heat versus electric heat for new schools.

This article contains new ammunition for fighting electric heat for new schools—it contains facts never before published.

Any oil heat enthusiast can use this article to learn how to prove, for example, that in an actual school $4.05 worth of electricity may be needed to provide 1,000 gallons of hot water, but 48¢ worth of fueloil will provide the same amount of hot water!

OIL HEAT EXPERTS, who sell fueloil and oilheating equipment, usually are assertive enough and bold enough.

Yet in a number of instances, in which electric heating was being considered for local schools, the local oil heat experts proved to be timid and afraid to speak up. When the salesmen for electric heat outlined point after point in its favor, and exhibited sheets and sheets of cost figures prepared especially to glorify electric heat, the men who could have been fighting in favor of oil heat were silent. They lost out because they didn't fight.

Check-ups made later brought out the reason for this. The local oil heat men, the sellers of fueloil and oilheating equipment, found themselves on an unfamiliar battle field, facing new and seemingly overwhelming weapons. They could not talk in terms of big figures representing the building costs and heating costs of the new school, which would be built . . . and the main arguments of the electric heat men revolved about these figures.

Still worse for oil heat, its local proponents could not talk in terms of millions of Btu's to be used for heating and water heating, as could the electric heat men. To have electric heat considered at all for heating these schools, the men recommending it had to discuss Btu problems at a university level. As that was above the heads of the local oil heat men, they remained silent. Because sometimes silence gives consent, the men making the decisions about heating the new schools obtained the impression that the arguments in favor of electric heat were correct, and that oilheating experts agreed with these arguments or could not prove them to be entirely wrong.

The electric heat men use a device which is misleading and which oil heat men should be 100% familiar with and able to debunk.

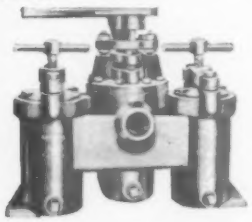
This misleading device includes setting up, by the electric heat interests, of cost figures for a school of usual construction, equipped with a usual heating plant powered by fueloil. The figures drawn up by the electric heat interests are highly complicated and snarled in fashions difficult to unsnarl. That is intentional; such snarling done by men who are specialists at this work requires specialists to do the unsnarling. The complicated figures boil down to giving unhappy numbers for the construction costs, and yearly heating costs of a school of usual construction and heated by oil.

The misleading device goes on to sets of figures for a school of entirely different construction, heated electri-

KRAISSL SEPARATORS

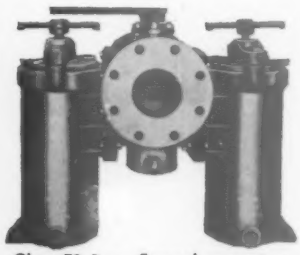
Why you need KRAISSL (UL) SEPARATORS

- **UL listed**—you'll find the Underwriters' Laboratories label on sizes used with automatic oil burning systems.
- **Minimum pressure loss**—high straining area ratios assure minimum pressure loss, which is so critical in suction lines.
- **Versatility-economy** — interchangeable, low-cost baskets eliminate need to buy complete separators for different screening requirements.
- **Selection** — single and duplex models, 1/4" to 6"; working pressures to 400 psig in cast iron—steel construction for higher pressures.



Class 72 integral duplex separators Bulletin A-1430

Class 72 single separators Bulletin A-1882



Class 72 3-pc. flanged separators Bulletins A-1879—1431

KRAISSL CO. Inc.

295 Williams Ave., Hackensack, N. J.

COMMERCIAL & INDUSTRIAL oilburning

cally. This has expensive thermal insulation for its outside walls and top-floor ceiling . . . six inches of insulation for this ceiling is usual. It has double-glazed windows throughout. But because this school lacks a boiler room, chimney, and usual heating system, the electric heat men's figures show it will cost less to build than an oilheated school of usual construction.

Next, sets of highly complicated figures show that the electrically heated school of the unusual construction will cost the same or less to heat than the oilheated school of usual construction. They indicate this despite the fact that the yearly cost of electricity for heating the school would be much higher than would be the yearly fueloil bill.

The first point for oil heat specialists to emphasize endlessly, in fighting electric heat in the field of schools, is that the Btu's obtained by buying electricity are terrifically high priced compared to the Btu's obtained in buying fueloil.

One of the best ways to drive this point home in a highly realistic manner is to compare the cost of heating water, for faucets, by using electricity . . . and by using fueloil.

As thousands of gallons of hot water will be used monthly in a new school, figure the cost of heating 1,000 gallons of water, 100°F. rise basis, say from 50°F. to 150°F.

As one Btu (British thermal unit) by definition raises the temperature of one pound of water by one degree Fahrenheit, and as one gallon of water weighs 8.3 pounds, it takes 830,000 Btu to heat 1,000 gallons of water from 50°F. to 150°F. This 830,000 Btu is the result of multiplying 1,000 times 8.3 times 100.

For heating the one thousand gallons of water, 830,000 Btu's are needed.

First, you find out the cost of that number of Btu's on the basis of obtaining the Btu's by buying and burning fueloil. We'll assume here that No. 6 oil will be used, will cost 7¢ per gallon, and that the overall efficiency at which the oil will be used is 80%. Such oil contains 152,000 Btu's per gallon.

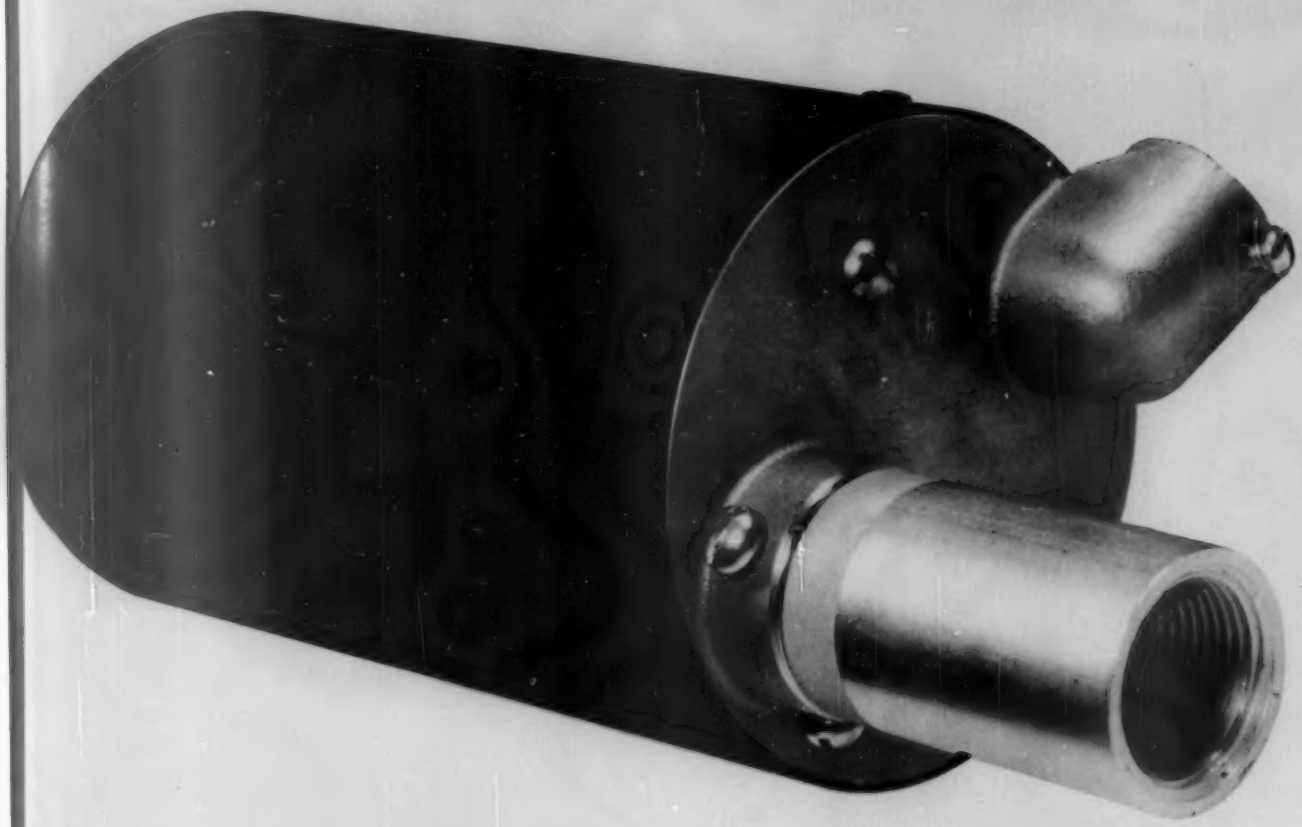
Dividing the 152,000 Btu's per gallon by 7¢ (price per gallon) shows that buying the oil provides 21,714 Btu's for each cent spent on the oil.

Multiplying this 21,714 by 80% (overall efficiency at which the oil will be used) shows that 17,371 use-

(*Please turn to page 85*)

HONEYWELL'S NEW C7012A

Ultra-Vision* Flame Detector



senses only the flame!

no more hot refractory hold-ins

USE OF ULTRAVIOLET RAYS REVOLUTIONIZES SAFETY STANDARDS IN FLAME DETECTION DEVICES FOR GAS, OIL AND COMBINATION GAS-OIL INSTALLATIONS

Honeywell's new ultraviolet sensor represents a major breakthrough in scientific flame detection. This revolutionary device employs an amplified ultraviolet signal to positively distinguish between an actual flame (ultraviolet rays) and a hot refractory (infrared rays). For the first time, you can be *absolutely sure* that fuel delivery will be stopped in the absence of flame.

This new control device is compact. It simplifies flame supervision of both single and multiple burners since the Ultra-Vision Detector, not being sensitive to a hot refractory, can be aimed at each individual flame in the most convenient way. This is the only device on the market that offers you this advantage.

Is it economical? Consider this: The amazing new Ultra-Vision Flame Detector will actually pay for itself in simplified installation and maintenance because—

• *wiring is less expensive in this system than in a lead sulphide cell* • *it can be installed easier because in flame sighting hot refractory can be ignored* • *there is no further need for flame rod replacement.*

*Trademark

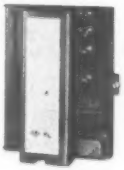
HONEYWELL'S NEW C7012 IS "SYSTEM ENGINEERED" FOR USE WITH ANY 2- TO 4-SECOND FLAME RECTIFICATION RELAY!

The Honeywell Ultra-Vision Flame Detector is designed for safe, foolproof flame detection when used with any of the following flame safeguard relays:

FOR MEDIUM BURNERS—RA890E PROTECTORELAY
The RA890E is a basic rectification relay ideally suited for use with the new C7012A Ultra-Vision Sensor. It's designed especially for pressure-gun oil burners, small combination gas-oil burners and gas-power burners.

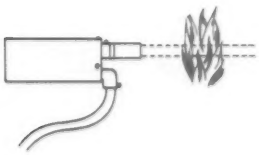
FOR INDUSTRIAL PROCESSING AND COMMERCIAL BURNERS (requiring manual start and complete cutoff on flame failure)—**R485 PROTECTORELAY**
Used with the new C7012, the R485 Protectorelay insures trouble-free operation and no "down time"—this system senses only the flame, never a hot refractory. The safety features of the R485 include a warm-up timer, a self-start check and a safe-operation check for immediate shut-down in event of abnormal conditions.

FOR INDUSTRIAL PROCESSING BURNERS AND OVENS—W124 PROTECTOGLO
Provides extended purge timings and cutoff of the main flame. Pushbutton and signal lights are a built-in feature of this system. The Ultra-Vision Flame Detector provides safe, dependable flame detection when used with the W124 Protectoglo.

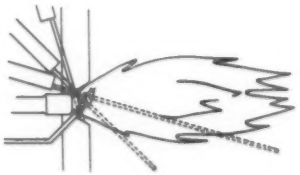


FOR LARGE CONVERSION BURNERS—R478 PROTECTORELAY
Here's an electronic programming relay for large horizontal rotaries, combination gas-oil burners, steam-atomizing burners and large power gas burners. The R478A may be used with the C7012A Ultra-Vision Sensor when burner sequencing is needed.

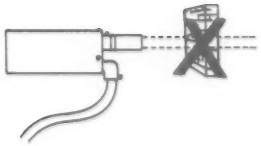
HERE'S WHY HONEYWELL'S NEW C7012 IS SO VERSATILE!



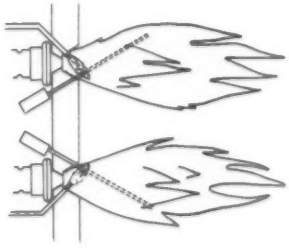
New Ultra-Vision Flame Detector sights flame of all fuels.



New Detector does an effective job on single burner pilot and main flame installations.



C7012 is not affected in any way by a hot refractory.



With Honeywell's new C7012, multiple burner installations can be monitored safely for the first time.

FOR MORE DETAILS, CALL YOUR LOCAL HONEYWELL OFFICE, OR WRITE TO HONEYWELL, MINNEAPOLIS 8, MINNESOTA; PHILADELPHIA 44, PENNSYLVANIA; OR TORONTO 17, ONTARIO

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COMMERCIAL & INDUSTRIAL oilburning

ful Btu's are obtained for each one cent spent on the fueloil.

As 830,000 Btu's are needed, divide the 17,371 into this number. You learn that to heat 1,000 gallons of water from 50°F. to 150°F. will use up 48¢ worth of fueloil. To heat 1,000 gallons of water using fueloil does not cost much . . . only 48¢!

Next, find out how much electricity, costing 1½¢ per kilowatt-hour, will cost to heat the same amount of water over the same temperature rise. Assume 90% efficiency; that allows for loss of heat from the electric water heater and the hot water lines, and for filling up hot water lines with hot water to cause faucets to give hot water (drawing cold water from hot water lines causes cold water to enter the water heater).

Multiply the 3,413 Btu's per kwhr by the 90% efficiency, and you learn that each kwhr provides 3,072 Btu of useful heat. Divide this by the 1½¢ cost of a kwhr, and you find that in buying electricity for water heating, the school obtains 2,048 Btu's for each cent it spends on electricity.

To heat the one thousand gallons of water requires 830,000 Btu's, as

has been established. Therefore divide that number by 2,048 Btu's (the number of useful Btu's obtained in one cent's worth of electricity). You learn that $4.05 worth of electricity is needed to heat the water.

A school obtains the same amount of hot water through using $4.05 worth of electricity, on the above basis, as by using 48¢ worth of fueloil!

These figures show that heating the water electrically will cost about eight and a half times as much as heating the water using fueloil!

These are the kind of figures to show to the executives planning a new school, and considering using electricity for heat and hot water.

In each particular instance, the precise figures for the costs of the electricity and the fueloil will be somewhat different, as costs of fueloil and electricity are different in different parts of the country. However, in many instances electricity costs, on a Btu basis, six to nine times what fueloil costs.

Oil heat men who become expert at doing the preceding kind of simple arithmetic involving fueloil costs, electricity costs, and efficiencies, can easily take into account the possible use and different prices of the lighter grades of fueloil, in addition to basing the figures on the use of No. 6 oil. Such men also gain the ability to figure gas heat yearly fuel costs, and to compare these with yearly oil heat costs.

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HEATERS

Vulcan's UL approved heavy fuel oil electric preheaters include low density tail piece heaters, return line heaters and circulation heaters.

Vulcan Tail Piece Heaters are made in 1, 2, 3 and 5 kw units, with automatic single or dual thermostatic control. They are available with 2" NPT screw mountings or 4" bolt circle flanges. Temperature is controlled to ±5°F. Automatic wattage output drop on low fire or standby is optional.

Suction or Return Line Heaters have standard wattage range of 6 kw through 38 kw, voltage ratings of 208, 240, 480, and 550. They are available with 2" NPT screw mountings or 3", 5" and 6" standard pipe flanges. Circulation heaters may be ordered completely assembled with insulated shell and jacket.

Available for stock shipment in most sizes.

OEM and jobber inquiries are invited.

VULCAN

ELECTRIC COMPANY

DANVERS 30, MASS.

Another problem for oil heat experts is to unsnarl the snarling done by electric heat salesmen, when these salesmen use their favorite trick of comparing yearly heating costs of an excellently insulated school heated electrically . . . with yearly heating costs of a school of ordinary construction (not splendidly insulated thermally) that's heated by oil.

To be fair, even sensible, oil heat men must point out to the executives considering electric heat versus oil heat for schools, a person compares same things with same things, not things too absurdly different for comparison. That is, in judging the products of two farms, for example, you don't judge the potatoes grown on one farm with the red beets grown on the other farm.

You compare red beets with red beets, and potatoes with potatoes.

Similarly, you compare highly insulated schools heated electrically with highly insulated schools heated by oil. You compare schools of ordinary construction, not well insulated thermally, which are heated electrically . . . with schools of ordinary construction heated by oil.

Usually the plans for a proposed new school start out with only ordinary thermal insulation—not with six inches of insulation over the top-floor ceiling, and not with double-glazed windows. Usually the plans, made first by the architect, include a boiler room and a conventional ventilating and heating system.

To do best at fighting electric heat, an oil heat expert should take the original plans, and should figure for himself:

1. The heat loss of the school, in terms of Btu per hour.

2. The Btu-per-hour load caused by operation of the school's ventilating system when the school is occupied.

3. The maximum Btu-per-hour capacity of the heating and ventilating system, which is obtained by adding the preceding two figures.

4. The gallons-per-hour firing rate, sum-total, required for the boiler or boilers, with the school oilheated; also the cost of using oil for one hour, at this rate.

5. The total kilowatt-hour capacity of electric heating and ventilating equipment, to do the same work hourly as is indicated in preceding items 3 and 4. Also the hourly cost of using electricity at this rate.

6. The number of Btu's needed yearly, to heat this school of usual construction.

7. The yearly cost of these Btu's, obtained buying fueloil.

8. The yearly cost of the same number of Btu's, obtained in electricity bought to heat the school.

9. The number of Btu's needed yearly to heat the hot water (on tap) that will be used in the school.

10. The cost of these Btu's, obtained in buying fueloil.

11. The cost of the same number of Btu's, obtained buying electricity to heat the water for hot water faucets.

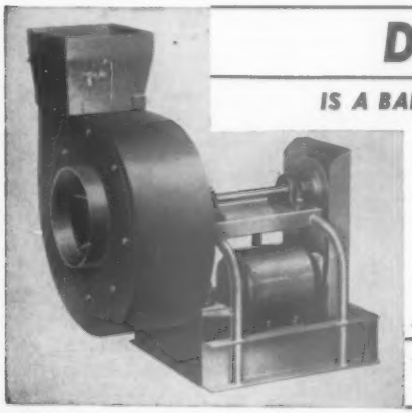
Most important, all of the preceding points relate to using either electricity or oil to heat a school of usual construction. In most instances, electricity will be found to cost six to nine times as much as fueloil—for powering the school's heating and ventilating system, and for providing hot water.

As the next step, draw up figures for a splendidly insulated school heated by oil, and compare these with figures for an equally splendidly insulated school heated by electricity.

Splendidly insulated, a school needs a certain number of Btu's per year for its heating and ventilating system. Determine the number. Ascertain the cost of buying those Btu's by buying electricity . . . and by buying fueloil.

A school needs a certain number of Btu's per year for water heating. Determine the number. Similarly ascertain the cost of the electricity needed for heating the water yearly, and the cost of the fueloil needed to do the same amount of water heating.

Fighting electric heat in the realm of schools, you probably can gain by doing one thing more. Make certain that several makes of electric heat equipment will be considered for the school, just as several makes of oil-burners, boilers, radiation or equivalent, etc. will be considered. Make certain that an architect or engineer draws up specifications for electric heating and ventilating equipment, and make certain he does this in a way that permits different contractors, planning on using different makes of equipment, to bid on the job. Insist, as this is necessary for fairness to the taxpayers who will pay for the school, that the bidding on electric heat equipment will be equally competitive to the bidding on oil heat equipment.



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WHITTY CO. INC. BOSTON 34, MASS.

Readers' Problems

Q. I service burners in many large apartment houses which have one-pipe steam systems by-and-large very much the same pattern. I can't figure out why some need only a few ounces of steam pressure, but in others I have to set up the high-limit control for five pounds.

F. W. R., Brooklyn, N. Y.

A. As we've often said before: With one-pipe steam, it's all in the venting. The installations you see which need unusually high steam pressure simply have radiators and steam mains which are air-vented intolerably poorly. Write to manufacturers of modern vent-valves, designed 100% for oilfiring. Learn much about such vent-valves. It's clear you can cut greatly the oil bills of many of the apartment houses—simply by selling their owners the modern vent-valves.

Q. One of my men went out to service a rotary-cup burner, using No. 6 oil, of a kind that's new to him. The only pressure gage on the burner seems to report the return-line pressure. This gage keeps on reading zero, because it can read high pressure (up to 100 to 200 lbs.) and on this job the normal return-line pressure is less than five lbs. So we can't find out from this pressure gage when the pump in the burner is pumping oil, after oil-line trouble or pump trouble, or after the job runs out of oil. Please describe any way to check on whether or not the pump in this burner is handling fueloil.

T. N. E., Downingtown, Pa.

A. Use a vacuum gage permanently installed on the output side of the suction-line strainer. Probably it will read between 5" and 10" vacuum (though it may read up to 15") with the burner running normally. To test pumping, close off tight for a minute or so a valve on the input side of the suction-line strainer. If the pump is in good condition and free of air from the suction line, the vacuum gage reading should go up to at least 25". Make this test with the burner running normally, of course, and for safety keep open the flame observation door.

Q. As I specify oilheating equipment for architects, your technical articles always prove invaluable to me. However, you never have given information on how large a rotary cup oilburner must be to justify its having low-fire start equipment.

U. A. K., Newark, N. J.

A. According to some burner men, above 20 or 25 gph size. According to others, above 35 gph size. Important factors are details of the particular installation, the type of boiler, and the willingness of the buyer of a large burner to spend extra money on a worthwhile, extra feature.

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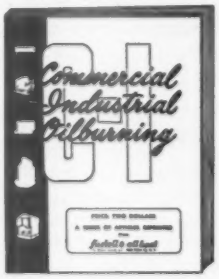

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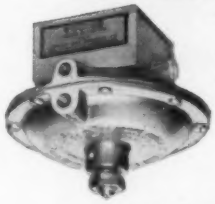

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Truck Talk

by Chet Cunningham

NOTICED THE SNAP in the morning air, or at least a little less of the old sunshine? Winter is on the way, and whether you live in Tampa or Tacoma it's high time to winterize those fueloil trucks of yours.

Taking up to 5,000 degrees of heat away from a small metal engine block is a tough job—yet your cooling system does a big part of the job every minute. A third of that heat is used as energy to move the pistons, another third is shot out of the exhaust system, and the last third goes through the block and into the cooling system.

Follow this check list to be sure your rigs keep running during this most important time of the year:

- Drain radiator, block, heater and other components.
- Flush, clean if needed. Flush only with thermostat removed.
- Check for bad radiator cap, hoses, gaskets, thermostat, drain cocks, plugs, fanbelt, fan and water pump.
- Determine antifreeze protection needed. Use permanent type antifreeze in amount needed, then fill tank half full of water.
- Blow out radiator fins, check system for leaks after warming engine and while engine is running. Add water to bring coolant level up to within one-inch of filler neck bottom.
- Check protection with hydrometer after engine is warm.
- Always use "permanent" type antifreeze. Don't re-use it. "Permanent" means that it won't boil away. But the rust inhibitors break down after a season's use and the solution also becomes contaminated with scale, flaking and mineral deposits. It will probably be far less expensive in the long run to buy good, new, permanent type antifreeze every year.

A new approach to "deadman" braking has been developed by a small company in Denver. It is called reflex braking and converts your truck or car accelerator to a brake.

It works this way. A valving system and vacuum-power unit is connected with the truck's regular braking system. When the driver pushes down on the gas pedal, he accelerates. When he relaxes his pressure he coasts, but when he raises his foot an eighth of an inch above the coasting zone, the braking pressure is applied.

This system cuts down on a driver's reaction time by 50%. As soon as he sees the danger and takes his foot off the accelerator, and before he can hit the brakes, the brake automatically is on. Normal braking action takes over as soon as the brake pedal is hit.

Here are some tips to help you extend the life of your battery.

Disconnect all the cables and brush away any loose dirt from the top of the battery and around the terminals with a wire brush. Use a solution of one-quarter pound of baking soda to a quart of water as a wash. Apply it with a paint brush to the terminals, the top of the battery case and to the metal ground strap.

Rinse off the soda solution with clear water and wipe dry. Clean and ream the inside of the cable clamps, spread them apart a little and install securely on the posts. Put a light coat of vaseline or other grease on the terminal tops to protect them from further corrosion.

Make sure not to let the grease get between the cable clamp and the battery post. Grease is an insulator. Remember, high voltage loss is usually directly related to the battery terminal condition.

Does the brake fluid your drivers rely on so much in their fueloil trucks have a high enough boiling point? Is it good enough to do the job that must be done right hundreds of times each day?

The Union Carbide company reports that only one brake fluid has been approved by the Society of Automotive Engineers. That is the SAE 70-R-1 heavy duty brake fluid. It has a boiling point of about 300° F.

With heavier trucks and faster speeds today, the boiling brake fluid problem is a real problem.

For example, a typical 1957 model car weighing about 4,000 lbs. was stopped repeatedly at high speeds. It generated a brake fluid temperature of over 250° F.

Only 13 states now have legislation against the sale of sub-standard brake fluids. Many fueloil dealers are unaware of this problem. Take a good look at the label on your brake fluid container and be sure that it is marked with the rating: SAE 70-R-1. Fluid of this type is made by most companies. Don't use anything else.

B. F. Goodrich passes along some more suggestions to help you get more wear from your tires. They say to check the mechanical condition of tire and wheel components. Rapid or uneven tire wear can be caused by:

Toe in—when wheels of same axle are closer together in front than in back. Tires show feathered edges at outside of skid design.

Toe out — is just the opposite. Wheels are too far apart in front, too close in back. Tires show feathered edges.

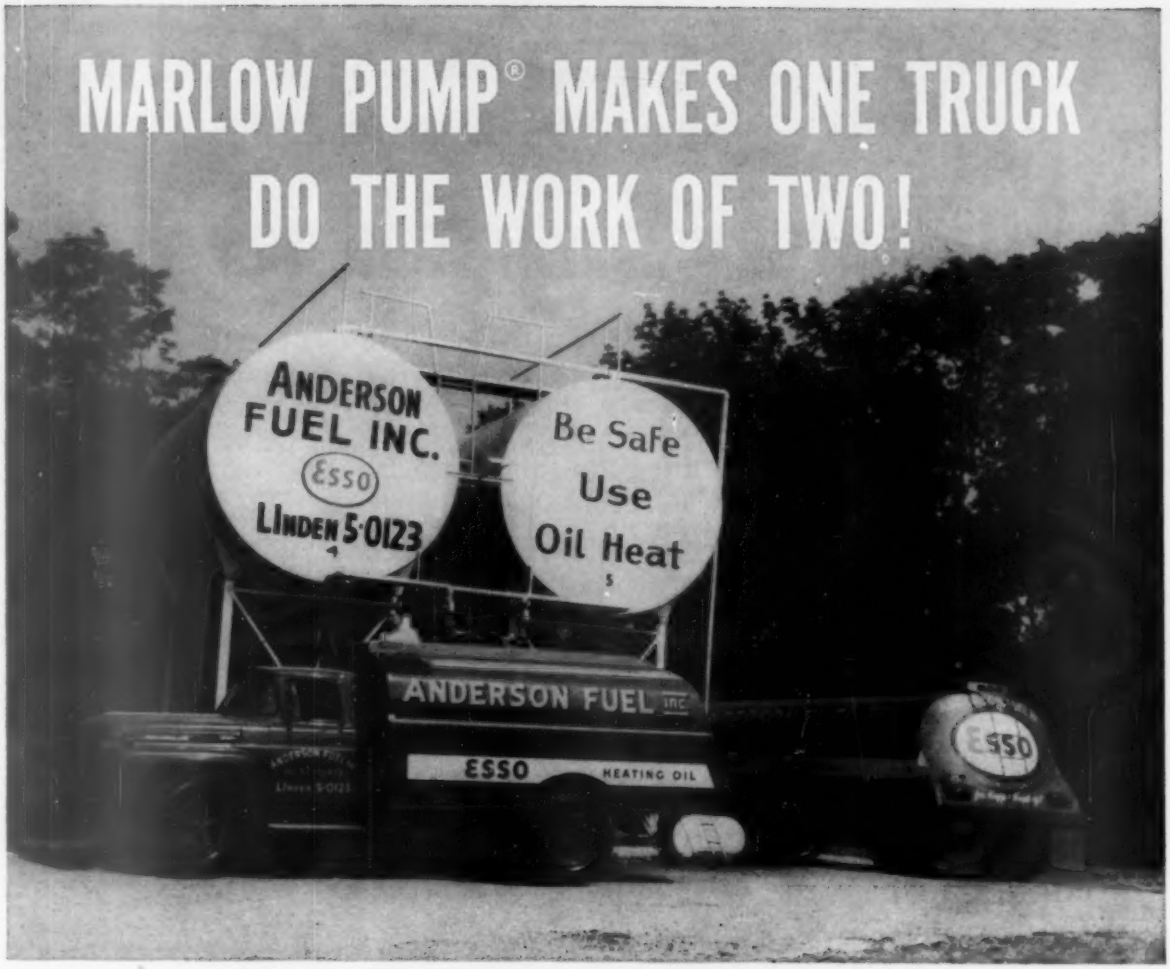
Camber — or tilt of the wheel. Should have zero camber. Positive or negative camber results in uneven wear on one side of tire.

Caster—the backward tilt of the axle or inclination of the kingpin. Too little and wheels wander or weave, resulting in spotty wear. Too much caster means wheel flight or shimmy.

Sprung or sagging axle—both cause uneven distribution of load on dual, inside dual will show greatest wear.

Worn wheel bearings—loose radius rods and U-bolts, unbalanced wheels or wobbly wheels, all will result in uneven and irregular wear.

A new truck tire remover has been developed. It separates the tire and rim in as little as 59 seconds. The derimmer will take any tire from 15 to 22 inches. It operates on a closed pneumatic system using compressed air over oil to bring the shovels down on the bead with an even all-around pressure. The unit eliminates damage to tires and rims caused by beating. It also provides maximum safety for personnel.



Anderson Fuel Cuts Operating Costs With More Efficient Equipment

Anderson Fuel, Inc. of North Scituate, Mass., has recently completed an expansion program to improve service to their fuel oil customers. The program includes the installation of two new 10,000 gallon, above-ground storage tanks which brings their total capacity to 50,000 gallons, a new 2,250-gallon home-delivery truck and a 5,500 gallon over-the-road transport.

The new home-delivery truck is equipped with a new 2MIG Marlow Power-Take-Off Pump that doubles the delivery rate of the old trucks. The performance of the Marlow-equipped truck is so efficient that Anderson now plans to equip three of their four old trucks with Marlows. The fourth truck will be retired and Anderson will still be able to service more customers, *faster,* at less cost!

Anderson's new over-the-road transport is also Marlow-equipped. It uses a Type "T" Engine Driven Pump that is mounted in a compartment of the truck to unload and strip the transport in 20 minutes. Overall, according to the Anderson people, the plant is now able to more than meet the competition of other companies in the area.

If your problem is that of meeting tougher competition, look to Marlow for your answer. Marlow builds a complete line of petroleum handling pumps for increasing the efficiency of bulk plants, home delivery trucks and transports. For details, see your Marlow dealer or write direct for Bulletin PM-06.

This engine driven Type "T" Marlow self-primer unloads and strips Anderson Fuel's 5,500 gallon over-the-road transport in 20 minutes.

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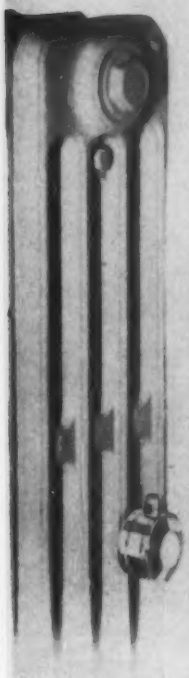

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NEW PRODUCTS

Lightweight gate Valve with nylon disc Material is added to OPW Line

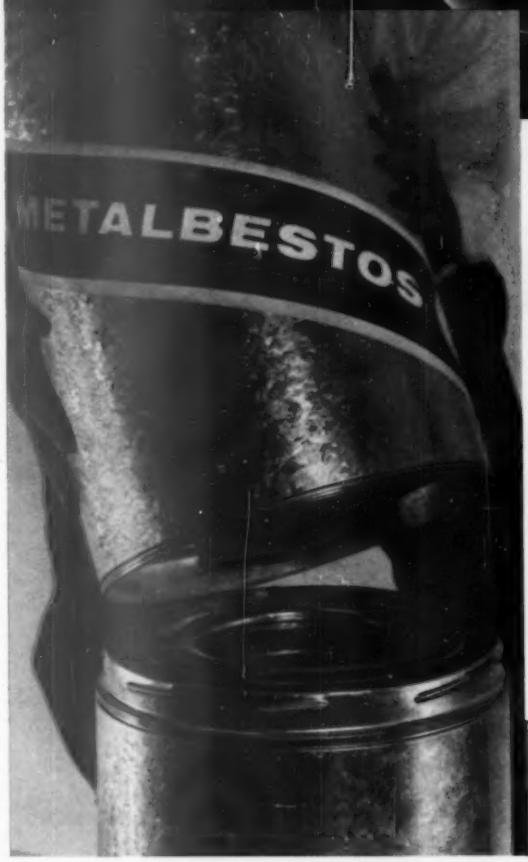
A SERIES of lightweight gate valves is offered by OPW Corp. Each 3″ No. 76 valve weighs seven pounds, about 12 pounds less than a comparable conventional valve. The valves have aluminum bodies and bonnets and nylon discs. The nylon is resilient and tends to form itself into minute scratches or worn surfaces in the valve seat and permits tight shut-off. Four styles are available: one with a bronze stem; one with a stainless steel stem; one with bronze stem and flanged body; one with stainless steel stem and flanged body. The valves can be used with pressures as high as 75 psi and temperatures up to 200° F.

Made by: OPW Corp., 2735 Colerain Ave., Cincinnati, O.

Dongan high voltage portable Tester is easy to carry, weighs 15 Pounds

A NEW TESTER which consists of a high voltage potential transformer, a voltmeter, a pair of high tension test leads for connecting to secondary terminals of the transformer under test, and a pair of primary leads to connect the primary of transformer to the proper current supply is made by Dongan Electric Manufacturing Co. The tester has been designed for easy portability and weighs 15 pounds.

Made by: Dongan Electric Manufacturing Co., Detroit 7, Mich.



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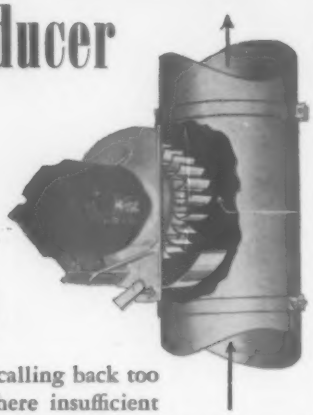

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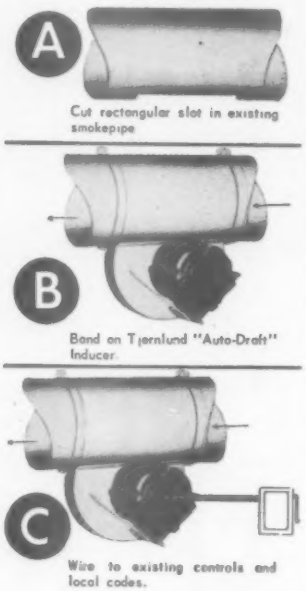
Simple as A-B-C to Install!



Only TJERNLUND has all these Features:

- Heavy Duty construction.
- Nationally known motor.
- Light weight.
- Quiet Operation.
- Built for years of service.
- Venturi-type operation.
- Doesn't rob furnace room of combustion air.
- Uses minimum smoke pipe length for mounting.

At your Jobber, or Write:

TJERNLUND MFG. CO.
2140 Kasota Ave., St. Paul 8, Minn.

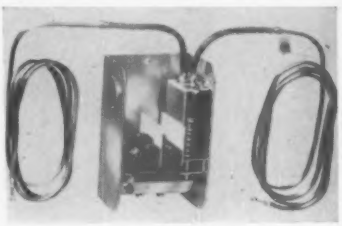
Fram's permachem-treated air Filters made of cellulose acetate Fibers

LONGER LIFE and better dirt-retention abilities are the goal of the new air filters introduced by Fram Corp. The permachem - treated filters are made of cellulose acetate fibers formed into a loose batt which contains millions of dirt traps. The filters use no oil, eliminating the problems of cleaning ductwork. The filters are germicidal and fungicidal, preventing growth of odor-causing bacteria. They are available in more than 300 sizes and types.

Made by: Fram Corp., Providence, R. I.

Dual-type temperature Controllers developed by Automatic Devices Co.

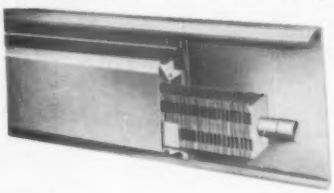
SIMPLIFIED, low-cost dual-type temperature controllers have been announced by Automatic Devices Co. The "weather-flow" combination provides an indoor-outdoor reset control arrangement of heat flow for winter heating and an extended tubular bulb type thermostatic controller for summer airconditioning control. Another form provides control of fan action in warm air installations in combination with reset control of burner action. Fan or pump action can be controiled from outdoor temperature, from system temperature or from room temperature.



Made by: Automatic Devices Co., Inc., 714 Hillgrove Ave., Western Springs, Ill.

Hydronic Baseboard featuring low Height has been introduced by Fedders Corp.

A LOW OVERALL HEIGHT of 7½" and a depth of 2⅝" are the dimensions of a new hydronic baseboard made by Fedders Corp. Model "F" has box type aluminum fins sturdy enough to support a man. When installed against studding it projects only 1½" from the wall. The vane-damper is standard equipment and installs instantly. The front cover panel snaps on without the use of any tools.



Made by: Fedders Corp., 58-01 Grand Ave., Maspeth, N. Y.

BOOST FUEL OIL DELIVERY by 10%

add stops-per-day

NEW BUCKEYE NOZZLE...SWIVEL...for low pressure-drop at high capacity

No. 125 FUEL OIL NOZZLE

Available with either 1¼" or 1½" IPT inlet — with or without tube and with or without integral check valve

- Less than 10 lb. drop at 100 gpm.*
- Higher lift, seat diameter larger than outlet tube.
- Designed for 125 gpm flow rate.
- Easy to open, easy to close because of hydraulically balanced design. No hammer or chatter.
- 4-notch replaceable guard permits easy control.

**Tested on nozzle without internal check*

No. 126 SWIVEL. Available in 2 sizes—1¼" and 1½"

- Fully repairable: remove plug and ball bearings. Bearings and quad-ring seal easily replaced.
- Teflon and ball bearings for easy operation.
- Full pipe size opening at both ends. Female portion of swivel (hose end) is larger than hose coupling—easy to attach and detach.
- Increases hose life. Prevents kinks, twists and damaging tension. Allows hose and valve to turn independently.
- Permanent lubrication of bearings; grease-sealed at factory.

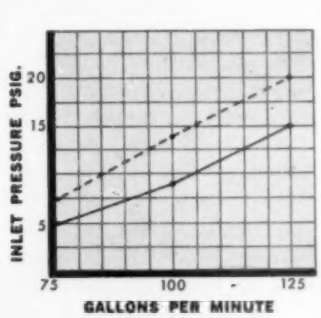
To you, time is money — and increased delivery capacity of your equipment adds to the number of stops your trucks can make per day. This new Buckeye combination is the only such system designed to give you low pressure drop at flow rates up to 125 gpm—virtually an "open pipe" system. Write for more information or contact your Buckeye distributor.

PRESSURE DROP AT INCREASING FLOW CAPACITIES

Typical 1½" fuel oil nozzle*

New No. 125* (1¼" and 1½" sizes—no difference)

**Both less check valve*



Buckeye **BUCKEYE IRON & BRASS WORKS**
Box 883 • Dayton, Ohio

fuel oil & oilheat

NEW! *Radiant* Glass Lined
WATER HEATERS
(Direct Oil-Fired)

FROM CARTON
TO INSTALLATION
IN ONE EASY STEP

Completely Wired!
Completely Mounted!
Completely Assembled!

it's a completely packaged unit ready for installation!

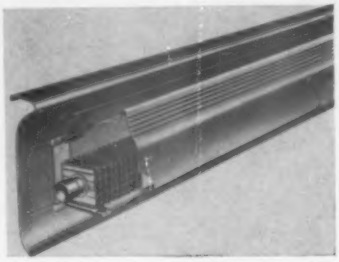
FEATURES:
- 10 Year Guarantee
- 3 Models: 135 GPH — 200 GPH — 270 GPH
- Highest Guaranteed Recovery
- High Temperature Combustion Chamber
- Simple to Clean and Service
- Fully Insulated Tank
- Complete with RADIANT Oil Burner and Controls

Other Series Available from 300 G.P.H. to 6000 G.P.H.

Write for Literature
RADIANT
UTILITIES CORPORATION
8817 18th Ave., Brooklyn 14, N. Y.

Edwards new baseboard Tubing made for zone control hot water Systems

BASEBOARD TUBING for zone control hot water heating systems is offered in a new ½" size by Edwards Engineering Corp. The company's line now includes both the new ½" and the standard ¾" nominal tube sizes plus high-capacity units. All are available in unbroken, factory-cut lengths from 2 to 20 feet. The Edwards system is suitable for every baseboard system, whether in single or multi-zone installations.



Made by: Edwards Engineering Corp., 101 Alexander Ave., Pompton Plains, N. J.

National-U. S. introduces "Bonnie Scot" Line of steam, hot water Generators

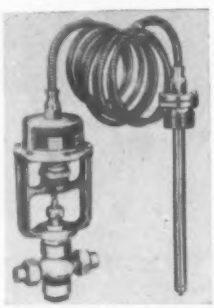
"BONNIE SCOT" is the name of a new line of packaged Scotch-type low pressure steam and hot water generators made by National-U. S. Radiator Corp. The units are available in 20, 30, 40, 50 and 60 hp models with net ratings ranging from 499,000 to 1,498,000 Btu/hr. Assembled, wired and tested at the factory, the units are shipped ready for immediate operation. Only piping and power connections in the field are required.

The three-pass boiler design provides a full 5 square feet fireside heating surface; 80% thermal efficiency is certified by the manufacturer. The unit is fully wet back and eliminates the need for rear refractory. Forced draft firing requires no stack or chimney.

Made by: National-U. S. Radiator Corp., Johnstown, Pa.

Cash-Acme temperature Regulators made for water Heaters, fueloil Preheaters

TEMPERATURE REGULATORS for use on water heaters, fueloil preheaters, fueloil coolers and storage tanks are made by Cash-Acme. Type TC and Type TCX regulators are vapor-pressure-operated and can be supplied as either direct acting regulators for heating applications or reverse acting for cooling applications.

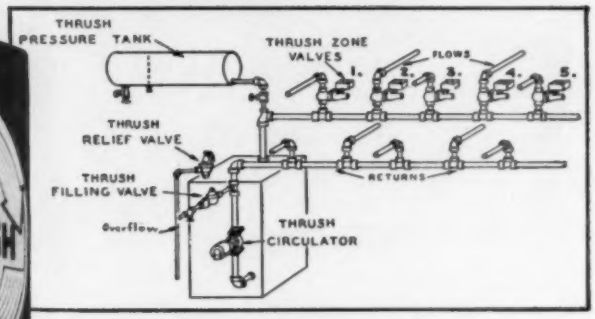


The series is available in bronze bodies in sizes from ¼" to 2" with union connections, and in iron or bronze bodies from 2½" to 5" with 125 pound ASA flanged ends. Temperature ranges from 25° F. to 385° F. in 40 degree increments. Capillary tubing, cable, temperature bulbs and wells are offered in various metals.

Made by: Cash-Acme, P. O. Box 191, Decatur, Ill.

THRUSH
ZONED HOT WATER HEAT

Handy Manual Adjustment



BRINGS YOU NEW

Sales Opportunities

In Motels, Apartments, Stores, Clubs, Churches, Large Buildings and Homes

MULTIPLE ZONING IS NO LONGER COSTLY!

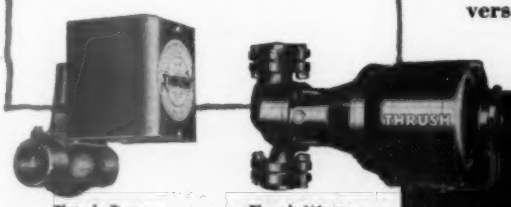
FEATURES OF THRUSH ZONE VALVE

1. SAVES TIME—No need to disassemble to install.
2. SAVES FUEL—Positive shut-off—no overheating.
3. EASY TO INSTALL—Can be installed in several positions.
4. SIMPLE WIRING—Wiring is low voltage.
5. QUIET—NO BANGING—Opens and closes gradually.
6. BUILT FOR LONG SERVICE—Parts are non-corrosive, closed switches, self-cleaning seat, double water seals.

MULTIPLE zoning today is not a luxury. Without much added expense you can install Thrush Zone Valves on every job so that each room or living area is separately zoned. Thrush zoning assures comfort and economy of operation because heat is not wasted and there is only one Circulator to buy and operate instead of one for each zone. As many zones as desired can be supplied from one boiler. Piping is smaller, lower in cost, easier and faster to install. There is less maintenance and lower power consumption.

A split-level or tri-level home must be zoned for good heating and cold weather comfort. Hot water heating does the job without stratification and maintains the desired temperatures in each zone uniformly. Suggest and install multiple zoning for greater comfort and greater customer satisfaction. When you think of zoned heating, think of hot water heating because no other form of heat has so much to offer in type of heat distributing units or versatility. See your wholesaler today or write Department C-11.

Quality Hydronic Heating Specialties



Thrush Zone Valve

Thrush Water Circulator

H. A. THRUSH & COMPANY

PERU, INDIANA

Quickdraft... THE WORLD'S SAFEST

POWER DRAFT UNIT FOR INDUSTRIAL, RESIDENTIAL AND INSTITUTIONAL EXHAUSTING

Increases heating and combustion efficiency!

Provides air power for bulk materials handling!

Exhausts corrosive gases and abrasives!

Quickdraft provides industry, commerce, institutions and homebuilders *power draft* engineered for economical and efficient combustion regardless of building or atmospheric conditions. Models suitable for every heating or incinerator application . . . eliminate pulsating or chattering, puffing, smoking and sooting. Reduce building costs, no tall, unsightly stacks required. Quickdraft also provides industry with ¼ inch to 60 inches W.G. static pressure for exhausting corrosive gases, abrasives and paint spray. Heavy-duty, high-pressure models, 6 inches to 30 inches diameter, are available for moving bulk materials or anything that can be moved by air. Because there are no motors, fans or bearings in exhaust line, only Quickdraft avoids costly clogging, corrosion of moving parts or fan failure.

IMPORTANT NOTICE

For withstanding corrosive gases, all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (P.V.C.) and with plastic and Fiberglas coatings.

N-622-QD

NO MOTORS FANS OR BEARINGS IN EXHAUST LINE

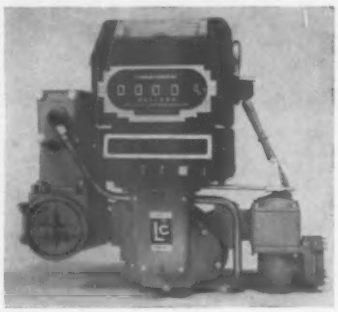
Send for QUICKDRAFT ENGINEERING DATA on your application . . . now.

Quickdraft CORPORATION

P.O. Box 87-F Canton 1, Ohio

Liquid Controls fueloil meter Assembly permits Dealer to vary discharge Rates

LIQUID CONTROLS meter assembly, Model M-7-N-X, features an air eliminator and air-actuated check valve. The assembly permits the discharge rate to be stepped up or slowed down during delivery without adjusting the check valve.



Air elimination is automatic, with a servo-mechanism energizing the check valve and stopping the flow if air enters the system. When the air eliminator has discharged the air, the check valve is de-energized automatically and flow is resumed.

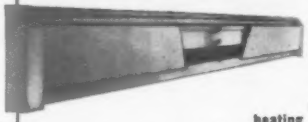
Model M-7-N-X is an integral unit and needs no external piping or connections. Maintenance is described as low since the elimination of air in the system results in pump performance at lower pressures which do not overburden the equipment.

The new meter assembly meets the requirements of the "split compartment" test for high pump speed fueloil tank trucks; either centrifugal or rotary pumps may be used.

Made by: Liquid Controls Corp., Commonwealth Ave., North Chicago, Ill.

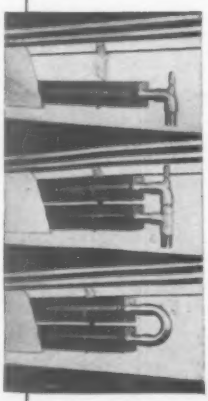
SINGLE OR DOUBLE TIER RADIATION SOLVES ALL HEATING REQUIREMENTS

Hoff PANEL LINE
HIGH OUTPUT . . . HANDSOMELY STYLED
BASEBOARD RADIATION



FREE-STANDING OR RECESSED

Rust-resistant electro galvanized steel. Full collar non-ferrous heating element. Snap-on accessories. Panels in 3, 4, 5, 6, 8 ft. lengths.



SINGLE TIER

For normal applications when heating requirements are at a minimum and sufficient wall space is available.

DOUBLE TIER PARALLEL

For cold climates where heating requirements are high. Also for bathrooms, kitchens and playrooms with limited wall space.

DOUBLE TIER SERIES

Equally effective as parallel, with additional advantage of returning to boiler or main without looping back under floor . . . essential where returning under cement slab floor is not practicable. Particularly suited for converting from old hot water or steam systems to baseboard.

Hoff MANUFACTURING CO.
BETHANY, CONN. MEMBER I-B-R
WRITE FOR LITERATURE AND INSTALLATION DATA

EDWARD PONTE, PARTNER, LA VALLEY OIL CO., NORTH ADAMS, MASSACHUSETTS

"Gained 75 new customers last heating season"

That's the usual pattern of growth for the La Valley Oil Co., North Adams, Mass., long-time Distributors of Texaco Fuel Chief Heating Oil and kerosine. What's more, this Company has practically tripled its sales of Fuel Chief since 1955, according to Edward Ponte, one of the four partners.

"Of course we work hard, but there are other reasons for our steady sales increase," he says. "Fuel Chief is the finest product home owners can buy—we never have any service trouble due to product quality.

"Also, we make good use of Texaco's cooperative advertising program.

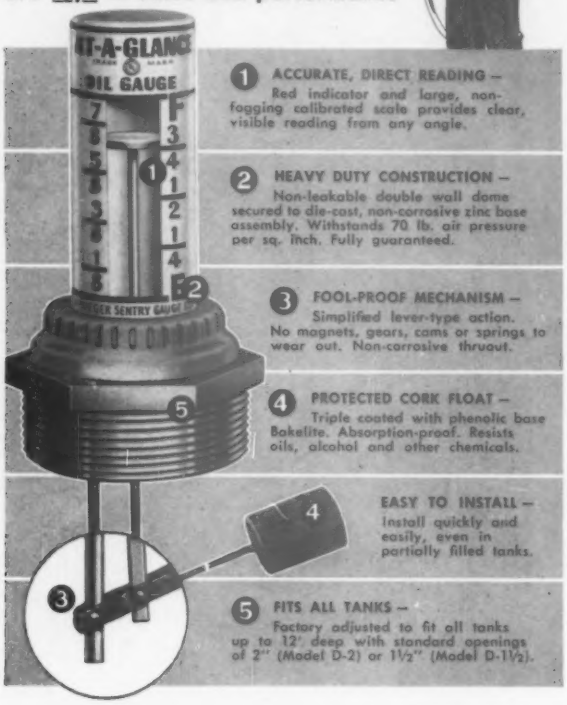
"Finally, we like to do business with Texaco people. They are friendly and helpful at all times, and really interested in the Distributor's success."

A solid future is one of the advantages of being a Texaco Distributor. There may be an opportunity for you. Call or write the nearest Texaco Inc. Division Office: Atlanta, Ga.; Boston 16, Mass.; Buffalo 5, N. Y.; Butte, Mont.; Chicago 4, Ill.; Dallas 1, Tex.; Denver 3, Colo.; Houston 2, Tex.; Indianapolis 1, Ind.; Los Angeles 5, Calif.; Minneapolis 3, Minn.; New Orleans 16, La.; New York 17, N. Y.; Norfolk 2, Va.; Seattle 1, Wash.

TEXACO FUEL CHIEF HEATING OIL

Fuel Oil & Oil Heat

Here's why *Sentry*
AT-A-GLANCE
TANK GAUGES
are tops in sales and performance



1 ACCURATE, DIRECT READING — Red indicator and large, non-fogging calibrated scale provides clear, visible reading from any angle.

2 HEAVY DUTY CONSTRUCTION — Non-leakable double wall dome secured to die-cast, non-corrosive zinc base assembly. Withstands 70 lb. air pressure per sq. inch. Fully guaranteed.

3 FOOL-PROOF MECHANISM — Simplified lever-type action. No magnets, gears, cams or springs to wear out. Non-corrosive thruout.

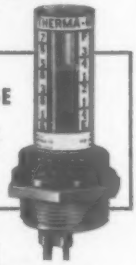
4 PROTECTED CORK FLOAT — Triple coated with phenolic base Bakelite. Absorption-proof. Resists oils, alcohol and other chemicals.

EASY TO INSTALL — Install quickly and easily, even in partially filled tanks.

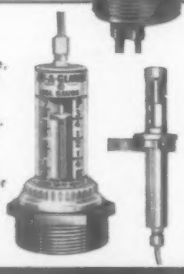
5 FITS ALL TANKS — Factory adjusted to fit all tanks up to 12' deep with standard openings of 2" (Model D-2) or 1½" (Model D-1½).

Fastest selling in the industry, Sentry AT-A-GLANCE gauges are recognized for their superior qualities of accurate measuring, clear visible reading, rugged but simplified construction and long-life durability. They are fully guaranteed and "listed as standard" by Underwriter's Laboratories. Complete Literature, Sales Brochures and Counter Displays available.

SENTRY Superior Quality THERMA-GAUGE
Similar to the standard AT-A-GLANCE gauge above, but features a solid red thermometer type indicator and a two-piece die cast plug-nut assembly which permits simplified tank installation.



STOVE AND SPACE HEATER GAUGES
Several models with accurate, easy-to-read indicators to fit all tanks. Also models for small tanks such as power mowers and outboard motors.



REMOTE READING TANK GAUGES
Several models for outdoor reading of levels in tanks indoors, underground or at delivery fill pipe.

KRUEGER *Sentry* GAUGES
GREEN BAY • WISCONSIN

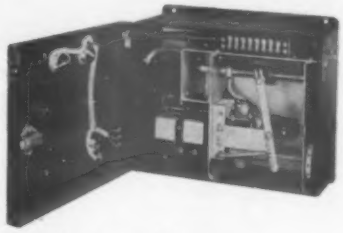
Kalamazoo Furnace designs oilfired Unit for small industrial Plants, large Homes

AN OILFIRED UNIT for small industrial plants, commercial establishments and larger homes has been designed by Kalamazoo Furnace & Appliance Manufacturing Co. The OFH 200 high boy occupies minimum floor space and has a rating of 200,000 Btu at the bonnet. Model OH 225 is rated at 225,000 and OH is rated at 250,000 Btu at the bonnet. Cold air inlets are indicated at each side of the unit.

Made by: Kalamazoo Furnace & Appliance Manufacturing Co., 100 Rochester Ave., Kalamazoo, Mich.

Cleveland master Controller for Use in automatic combustion Control

CLEVELAND CONTROLS announces a new master controller for automatic combustion control systems. It is a heavy-duty sensing and controlling instrument, responsive to changes in pressure or temperature and transmitting line voltage signals to other system components for control of firing rate, damper positioning, valving, etc.

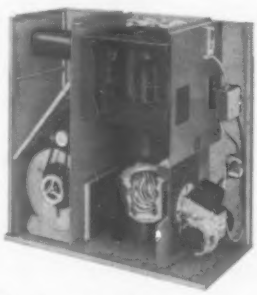


Models are available for controlling steam pressure in standard ranges from 0 to 30, 20 to 100, 75 to 300 psi, as well as temperatures up to 750° F. Higher ranges or temperatures furnished on special order.

Made by: Cleveland Controls, Inc., 1111 Brookpark Road, Cleveland 9, Ohio.

Premier oilfired furnace Line has package Units in three Types

BASEMENT, counterflow and hi-boy models are available as package units in the Premier oilfired furnace line. Each type includes five models, with capacities ranging from 91,000 to 175,000 Btu input, 72,800 to 140,000 Btu output at the bonnet.



Equipped with high pressure gun type burners, firing capacities start with .65 gph for the smallest size to 1.25 gph for the largest. Each model is equipped with a ¼ hp blower motor. The furnaces feature wrap-around square radiators for added heating surface. Also the flue extends through the cabinet of the basement model to add to the heating surface.

Made by: Premier Furnace Co., Dowagiac, Mich.

Talking to customers about firebox installation?

Point out that

B&W IFB

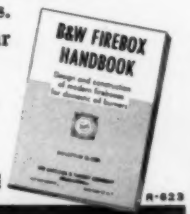
also means savings

In Fuel Bills

Here's a "dollar-and-sense" sales story on firebox installation that will help your customers save 15-25% in fuel bills. That's how much B&W Insulating Firebrick, *the lightest insulating firebrick made,* can cut fuel bills each year.

The reason? B&W IFB have millions of tiny air cells that impede the flow of heat. As a result, these brick come up to operating temperature faster. Heat is held inside the combustion chamber. That means lower fuel bills, more complete combustion, clean and odorless heat.

Increase your sales and profits by telling your customers the benefits of B&W fireboxes. It's an effective way to build your reputation in a community.



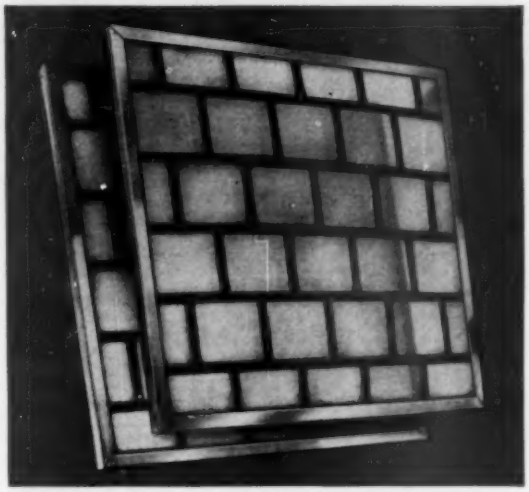
A Valuable Guide for Every Installer

Send today for this Handbook! R-623

THE BABCOCK & WILCOX CO.
Refractories Division
Works: Augusta, Ga.
General Offices: 161 East 42nd St., New York 17, N. Y.

NEW

permanent low-cost DusT-ban filter offers bigger profits for you. Bigger savings for your customers!

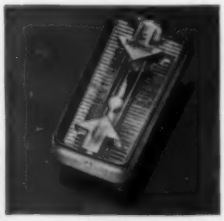


SKUTTLE'S HIGH QUALITY DUST-BAN OFFERS ADVANTAGES FOUND IN AIR FILTERS COSTING TWICE AS MUCH.

Increase your profits from filter sales by selling the best package deal ever offered! The new Skuttle DusT-ban Air Filter provides the finest in permanent filtration at the lowest possible price! The savings to your customers continue for years after the initial purchase, because the DusT-ban is completely washable . . . no oiling necessary. Manufactured to give years of service, the DusT-ban is designed to remove the smallest particles ELECTROSTATICALLY, yet the wide open grill permits maximum air flow at all times.

Write for descriptive literature today.

FILTER SIZES	16" x 20" x 1" 16" x 25" x 1" 20" x 20" x 1" 20" x 25" x 1"	RETAIL PRICE $4.95 each



FREE

Check with your wholesaler on Skuttle's *FREE* filter gage offer.

As advertised in House & Garden and House Beautiful

Skuttle MANUFACTURING CO.
MILFORD, MICHIGAN

New Babcock & Wilcox Firebrick is stronger and lighter weight

B & W K-20 and K-23 insulating firebrick is light in weight and low in thermal conductivity. K-20 has an average weight of 1.70 lbs. per 9-in. straight; K-23 averages 1.85 lbs. per 9-in. straight. Also, K-20's mechanical strength has been increased by more than 65% and by more than 50% for K-23.

The brick in addition offers a lower thermal conductivity or "k" factor and stores less heat.

Made by: Babcock & Wilcox, 161 East 42d St., New York, N. Y.

Dayton Rubber Co. designs vacuum Hose which will carry electrical Current

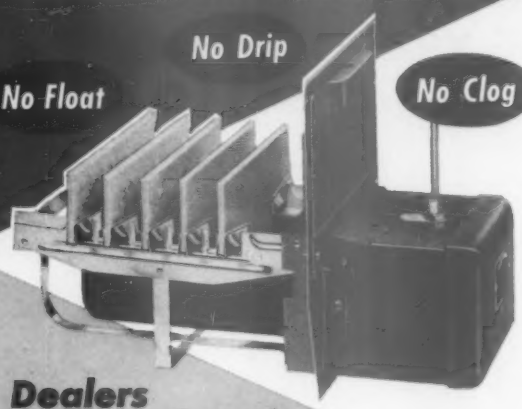
DESIGNED to carry electric current is the new vacuum cleaner hose made by Dayton Rubber Co. It was developed for use on cleaners featuring a motor driven brush on the cleaning head. A switch permits fingertip control.

Made by: Dayton Rubber Co., Dayton, O.

Again . . .
TOP SELLER IN 1958

Autoflo "150"
AUTOMATIC HUMIDIFIER

No Drip
No Float
No Clog



Dealers prefer Autoflo for all these reasons:

- Large, Clog-Free Orifice Replaces Troublesome Needle and Float Valves
- No Moving Parts to Wear or Need Adjustment
- 50% Greater Humidifying Capacity
- Fast Installation in Every Type Furnace and Bonnet. And no Call Backs—Enjoy Your Profits

unbreakable feather-lite

MIRACLE FIBERGLASS EVAPORATOR PLATES
+ Pick-Up More Water + Evaporate More Water + More Porous for Longer Life + Built-in Sacrificial Anode Protects Pan + Rustproof Drain Clips Prevent Drip

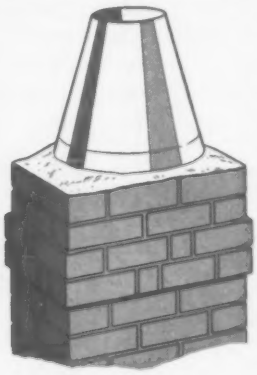
MORE and BIGGER PROFITS
with the Autoflo "150" Automatic Humidifier
Write for Complete Information Today

AUTO-FLO CORPORATION
12085 Dixie Street, Detroit 39, Michigan
Please send me full information on:
☐ Auto-Flo Fuel Oil Filter ☐ Auto-Flo Automatic Humidifier
Name _____
Address _____
City _____ Zone _____ State _____

I give Expert Service and I use . . .

The WIGWAM-THERMCAP Eliminates

- DOWN DRAFT
- SLUGGISH DRAFT
- DAMAGING ACIDS
- CARBON
- CREOSOTE
- RAIN MOISTURE
- FUEL GAS CONDENSATION



The WIGWAM-THERMCAP improves combustion — thus saves fuel. Looks good — is good. Keeps entire chimney dry. Has no moving parts to wear out. Saves costly repairs. Poor draft is dangerous; good draft means economy. The patented principle of WIGWAM-THERMCAP creates a draft-pull at the chimney top. ADAPTABLE TO ALL CHIMNEYS.

Special WIGWAM-THERMCAP representatives' contract available to qualifying dealers.

"My Customers appreciate the DIFFERENCE!"

For details, write to:

BOSTON MACHINE WORKS COMPANY
Oil Heating Supplies Div.
7-17 WILLOW STREET
LYNN, MASSACHUSETTS

BUSINESS IS BETTER WHEN YOU DO BUSINESS WITH COASTAL

OIL
COASTAL
COMPANY

COASTAL OIL COMPANY

Now, More Than Ever Coastal Does The Most For Fuel Oil Dealers

COMPLETELY EQUIPPED FOR FAST INSTALLATIONS

- PLENTY OF HEAT AND HOT WATER
- FUEL-SAVER — economical to operate
- FULLY WIRED AND ASSEMBLED READY TO INSTALL IMMEDIATELY
- FITS THROUGH A 30-INCH DOOR in easy one-man handling crate
- BUILT TO FIT THE MODERN HOME

QUICK AS HELLO AND GOODBYE

nationally advertised

L.O. KOVEN & BRO., INC.

RICHBOYNTON ROAD, DOVER, NEW JERSEY

. . . . New Products

Dole float Valve has silicone Seat to prevent metal-to-metal Contact

MODEL 200 float vent valve developed by the Dole Valve Co. has a silicone seat that prevents metal-to-metal contact and insures a tighter close even when foreign matter is present. The valve is intended for pressure up to 35 psi and is finished with heavy nickel plate that prevents corrosion. It is designed for any gravity or hot water heating system or chilled water cooling system.

Made by: Dole Valve Co., 6201 Oakton St., Morton Grove, Ill.

Boiler cleaning and sealing Compounds made by J. A. Sexauer Manufacturing

TWO COMPOUNDS for reconditioning heating systems have been introduced by J. A. Sexauer Manufacturing Co. Heat-Pep Cleaner removes rust and sludge from boilers and simultaneously coats boiler walls. It vaporizes as it cleans and moves through the entire heating system. Heat-Pep sealing compound mixes with boiler water. Boiler pressure causes the compound to form a permanent bond that becomes a part of the boiler. This seal is not affected by expansion or contraction. Both products are available in liquid and powder forms.

Made by: J. A. Sexauer Manufacturing Co., 2503-05 Third Avenue, New York 51, N. Y.

here's
a
tip...
HARSCH nozzles give a balanced spray in both hollow and solid cones . . . every nozzle individually checked for spray angle and capacity . . . easy to clean POLISHED TIP reflects heat . . . peak performance with ALL types of U.S. and Canadian fuel oils . . . plastic container stamped for size and angle.
Write today, on company stationery, for complete information and FREE SAMPLE.
Manufacturer's Sales Reps. inquiries invited.
Over 25 years of successful nozzle making
H. HARSCH & CO.
230 Tuscan Rd. Maplewood, N. J.

GENERAL "800" TURNS HOT, DRY AIR INTO COOL PROFITS!

4 out of 5 Homeowners Need This Furnace Humidifier!

- Lifetime cast iron and steel construction protected with durable, rust-resistant plastic coating.
- Hi-density wool felt cartridges trap moisture, dirt, lint; prevent nozzle clogging.
- Wool felt cleaned and permanently bonded to center core—can't crumble.
- 3 models—1A-25A, 2A-700A, 2A-300.

- Saves up to 25% in heating costs in a single heating season!
- Works in any type heating plant—oil, gas, coal, wood.
- Safe! No flash, flare or intense heat.
- Fast acting! Destroys a ½" soot layer or more in 2 to 5 minutes.
- Non-corrosive; won't harm burner parts.
- Made for General Filters, Inc.

Easy to Install...Clog-free... Automatic...

Hot, unhumidified air—like the hottest Sahara breezes— can soon dry out furniture glue, cause plaster cracks, make carpets brittle. Head colds, dry skin and scratchy nose and throat can result, too. *Yet, fewer than one warm air furnace in five has a humidifier.*

Many heating servicemen are earning as much as $3000 a year *in extra business* by selling the health, comfort and protection features of the GENERAL 800 HUMIDIFIER.

GENERAL HUMIDIFIER is foolproof, simple to install during regular service calls (average time: 30 minutes), and competitively priced. It's backed by a 1-year guarantee on all parts—protecting both you and your customers.

When you service a furnace without a humidifier, point out these dangers of too-low humidity . . . and *recommend a General.*

GENERAL FILTERS, INC.
43800 Grand River Avenue
NOVI, MICHIGAN

IN CANADA: Canadian General Filters, Ltd., 39 Crockford Blvd., Scarborough, Ont.

GF PRODUCTS

Member of the Humidifier Association

White-Rodgers '59-'60 Catalog lists heating, cooling Controls

LISTING the firm's entire line of automatic controls for heating and airconditioning is a 56-page catalog issued by White-Rodgers Co., St. Louis Mo. Catalog is the largest ever done by the company, with many new products.

Combination zone control packages for both warm air and hydronic systems are included as are the two-piece oilburner control and the complete line of fan and limit controls.

Full specifications, plus a description of operation and general applications are included in each product listing. Copies may be obtained at any White-Rodgers sales office or by requesting Unit R-1650 from the company at 1209 Cass Ave., St. Louis 6.

Big Job Hercos with electronic controls.

For Commercial and Industrial. 5 to 20 gph.

New M-H R-890E electronic controls.
Burn No. 2 oil.
Simplified, easy servicing.
Competitively priced.
Low maintenance.
Individually fire tested and guaranteed.
Famous Herco Quality in design, materials, workmanship.
Field tested, proved in US* and abroad.

* Widely used in US Government Buildings as well as private industry.

Loosen 3 screws; entire ignition assembly lifts out. Model GS-3 (5-10 gph) illus. Similar Model P-50 (8-20 gph).

OIL-THRIFTY HERCO

A complete line of Heating Equipment for every type, size Job. Free catalogs.

HERCO OIL BURNER CORPORATION, LANCASTER, PA., U.S.A.

Warren Webster names Ward marketing Vice President

ANDREW WARD has been appointed vice-president of Marketing, Warren Webster & Co., Inc., Camden, N. J. In the past he has been active in association activities and has been an executive of Chrysler Airtemp and Worthington Corp.

Ward

According to Newton W. MacNichol, general sales manager, the company recently opened a new area sales office located at the home office. Called the Delaware Valley Office, it will be managed by Raymond H. Wolf.

Amco Corp. opens sales Office in Farmingdale, Long Island

A NEW SALES OFFICE and warehouse has been opened in Farmingdale, N. Y., by Amco Corp., Chicago, distributors of liquid handling equipment.

This new distribution center at 81 Gazza Boulevard is the fourth unit in the Amco Eastern division group. Other offices and warehouses are located in Long Island City, N. Y., Linden, N. J., and Philadelphia.

Each unit maintains a complete stock of couplings, hose reels, hydraulic drive systems and bulk plant equipment; the warehouses also offer complete installation and maintenance service for trucks.

Fedders forms Department for central Airconditioning

MARKETING the line of central airconditioning has been made the responsibility of a separate department by Fedders Corp., Maspeth, N. Y.

Claude C. Kirk has been named national sales manager and John B Mitchell, assistant sales manager of the new central residential and commercial airconditioning department.

In outlining plans for the department, Kirk said that emphasis will be placed on the existing home market as well as new construction. New products will be unveiled before the first of the year.

Ingersoll

Makes the Stainless Steel* *that Makes Combustion Chambers Better*

Heat Resisting • Sheared to Size

We custom shear this special steel to your blank sizes or multiples—to reduce scrap, to save you time, and to cut your costs.

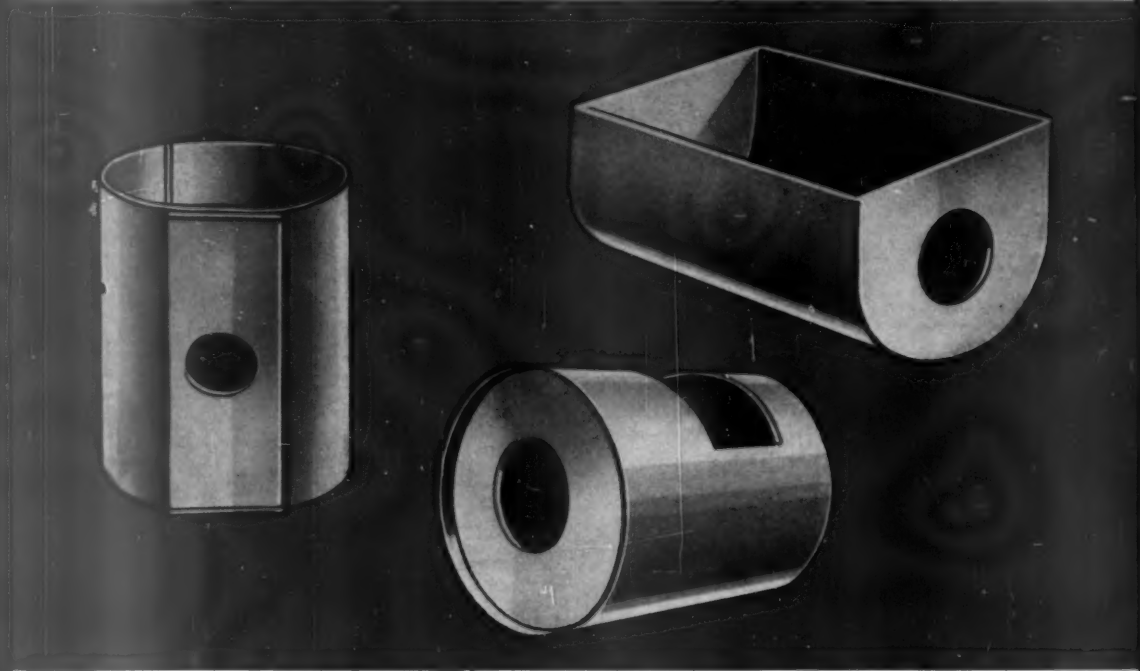
The better the steel, the better the combustion chamber for oil fired furnaces. For this purpose, *nothing beats Ingersoll heat-resisting stainless.*

This special analysis steel is scientifically formulated to withstand high temperatures, and constant expansion and contraction under heating and cooling.

With exceptional forming characteristics, Ingersoll heat resisting stainless steel fabricates easily to permit freedom of design and production techniques.

So—it *pays* to specify Ingersoll heat resisting stainless steel for *your* combustion chambers. Try it, and see.

**Ingersoll makes the steel—not the combustion chambers*



ADVANTAGES OF STAINLESS STEEL COMBUSTION CHAMBERS

- No breakage in shipment or handling
- Lighter weight lowers freight costs
- Quicker heating—for greater efficiency
- Cleaner heat—better temperature control

1884 75 YEARS 1959

Ingersoll STEEL DIVISION

Borg-Warner Corporation

NEW CASTLE, INDIANA

NEW FROM DODGE FOR 1960

The thriftiest trucks, in the widest tonnage range, Dodge has ever built . . . including totally new cab-forward models with diesel or gasoline engines.

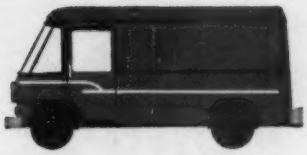
Name your job. There's a Dodge truck to do it. For Dodge has never had a line-up as great as this new 1960 truck platoon. Spirited panels and pick-ups that deliver up to 200 horsepower. Rugged stakes with up to 19,500 lbs. G.V.W. Husky 4-wheel-drive models with wheelbases from 108″ to 174″. All these and more make Dodge your smartest choice for efficient, low-cost hauling. And in the heavyweight class, Dodge introduces a completely new line of cab-forward models, trucks engineered to put real muscle into your biggest jobs, trucks whose new Servi-Swing fenders open with a simple latch and allow you to walk right up to the engine! See your Dodge dealer. He'll be pleased to give you the full Dodge truck story for 1960.

DEPEND ON **DODGE** TO SAVE YOU MONEY IN **TRUCKS**

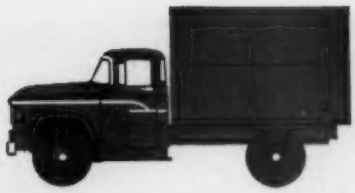
A PRODUCT OF CHRYSLER CORPORATION

"JOB-RATED" FROM 4,250 LBS. G.V.W. TO 76,800 LBS. G.C.W.

SWEPTLINE pick-ups head their class in looks; lead in load space, power. 4-wheel-drive optional.



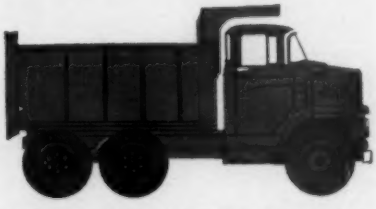
FORWARD-CONTROL chassis put famous Dodge dependability under the body of your choice.



VAN and other special bodies are easily accommodated by most 1960 Dodge trucks.

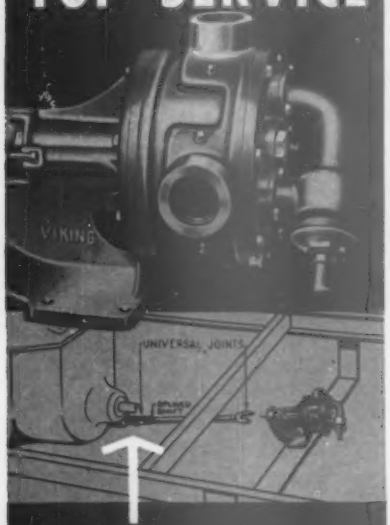
TRACTOR models with compact new 89¼" BBC pull longer trailers, bigger legal payloads.

STAKE bodies from 7½′ to 14′ are built by Dodge on models to 19,500 lbs. G.V.W.



TANDEM units provide top hauling strength for dump and other extra-rugged operations.

for
TOP SERVICE it's VIKING PUMPS



NO SPEED INCREASERS REQUIRED. CONNECT THE VIKING TRUCK PUMP DIRECTLY TO TRANSMISSION THROUGH POWER TAKE-OFF.

Specify Viking Pumps for efficient service and long life! Experience shows that, in many cases, Viking Pumps are still going strong when trucks they're mounted on are worn out. Then pumps are remounted on other trucks for more service. Viking Truck Pumps also give you:

- Fast, positive delivery.
- Revolvable casing for handy port locations. 8 positions.
- Integral thrust bearing of sturdy construction.
- Either extra long packing box or mechanical seal.
- Safety valve on pump head.
- Complete capacity range of 35 to 300 gallons per minute.

For information, write for Catalog GEE

VIKING PUMP COMPANY
CEDAR FALLS, IOWA, U.S.A.
In Canada, it's "ROTO-KING" Pumps
Offices and Distributors in Principal Cities
See Your Classified Telephone Directory

Chrysler Airtemp Dealers win Trips to Rome, Paris

DURING September, 52 distributors and dealers spent 11 days touring Rome and Paris as winners of a sales contest held by Chrysler Airtemp, Dayton.

The winners were chosen on the basis of dollar volume and percent of airconditioning sales quota. Joseph B. Ogden, sales vice-president, served as host to the group. He said that June sales for the company represented the highest total for any month in Chrysler history.

New Jersey heating Engineers hear Discussion on Boilers

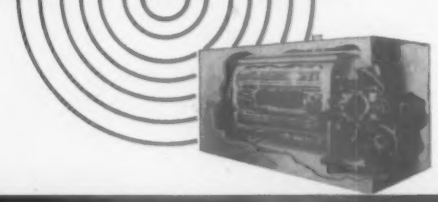
HEATING and consulting engineers from the northern New Jersey area recently attended a meeting in Newark sponsored by Joe Pinter, regional representative of The Spencer Boiler Co.

Panel members included R. M. Beningson, Cleveland controls; Frank Brenton, Honeywell; A. W. Brown, Holby Valve; George Nash, L. J. Wing Mfg. Co.; John Scheibl, Petro; and C. W. Shaffer, Spencer Boiler.

When it comes to Hot Water Heat, You can't beat Bethlehem DYNATHERM

40% FUEL SAVINGS + ABUNDANT HOT WATER YEAR 'ROUND + AMAZING HEATING EFFICIENCY = $ALES

THE EXCLUSIVE "WHIRLING FLAME"
BURNS EVERY SINGLE DROP OF OIL—PROVIDES GREATER HEAT THAN BOILERS 3 TIMES ITS SIZE.



What benefits your customers adds up to profitable sales for you, and plenty of them. Here's what Bethlehem Dynatherm offers.

- It will actually pay for itself in 5 years, through fuel savings up to 40%. This is a fact that has been proved over and over again!
- Gallons and gallons of hot water . . . 24 hours a day . . . the year round!
- Tough, long-life steel construction for durability and *fast* heat response!
- A completely enclosed self-contained unit that occupies a minimum of space . . . It's downright attractive!

Guaranteed by a company with over 100 years experience in heat production and transfer.
BETHLEHEM FOUNDRY & MACHINE COMPANY · Bethlehem, Penna.

RIGHT to the penny!

It's an A. O. Smith T-6 truck meter...

Suits you to a "T" — that's the good word for A. O. Smith's Model T-6 truck meter shown here. Tailored for top performance on trucks engaged in rural and domestic fuel oil delivery, this meter operates consistently regardless of temperature extremes. Never misses — even in coldest weather.

With unduplicated A. O. Smith rotary principle, the Model T-6 stands as the best buy in its metering class. The pay-off is precision measuring of all kinds of liquid petroleum products . . . year after year.

Enjoy true measure with a "T." For all the facts about this and other A. O. Smith "T Series" truck meters — write today for free, illustrated bulletin 127-C.

Through research . . . a better way

A.O.Smith
CORPORATION
Smith-Erie Division

Factories: 5715 Smithway St., Los Angeles 22, California; Erie, Pennsylvania. Offices: Atlanta 5, Ga.; Chicago 3, Ill.; Houston 2, Texas; Los Angeles 2, Calif.; New York 17, N .Y.; Oakland 21, Calif.; Tulsa, Okla. Canada: Toronto 12; Vancouver 1. A. O. Smith INTERNATIONAL S. A., Milwaukee 1, Wisconsin, U. S. A.

Fuel oil & oil heat

PRINTED FORMS
For Immediate Shipment

Check items you are interested in. Attach to your letterhead, mail for FREE SAMPLES:

- ☐ Fuel Oil Order
- ☐ Petroleum Price Cards
- ☐ Phone Call
- ☐ Inspection Information
- ☐ Interoffice Correspondence
- ☐ Service Order
- ☐ Heating & Burner Material
- ☐ Service Dept. Record
- ☐ Survey Sheets
- ☐ Delivery Record
- ☐ Service Record Cards
- ☐ Servicemen's Daily Report
- ☐ Driver's Route Cards
- ☐ Degree Day Cards
- ☐ Metered One-Time Carbon Delivery Tickets (Truck—Bulk Plant—Gas Pump)

My Name .....
Company .....
Street .....
City .....State .....

DEGREE DAY SYSTEMS
39-30F 58 ST., WOODSIDE 77, N. Y.

Penn Controls moves Office to Chattanooga, Tennessee

PENN CONTROLS, INC., Goshen, Ind., has moved its Birmingham district sales office to Chattanooga.

William P. Marshall, district manager, will continue to serve the territory from the new office location.

Edwards Design Handbook now covers zoned baseboard Heat

A DESIGN HANDBOOK covering all aspects of low cost, zone control hot water baseboard heating for new homes has been published by Edwards Engineering Corp., Pompton Plains, N. J.

The complete system—boiler-burner, zone control valves and baseboard radiation elements—is covered in this reference book. Also included is a section on airconditioning.

Wanson Corp. to make and sell Thermobloc industrial Heaters

THE WANSON CORP. has been incorporated in Lewistown, Pa., to manufacture and sell Thermobloc industrial and commercial warm air heaters under license from Establishments Wanson, Brussels, Belgium.

These heaters have been fabricated in Lewistown for the past three years by an affiliate of the new company, but were sold by a Connecticut firm

Officers are Harry L. Siegel, president; G. Clifford Rice, vice-president; Stanley H. Siegel, secretary and John T. Rodgers, treasurer.

'Net Trade Price Book' is published by Crane

NET TRADE Price Book No. 115 has been issued by Crane Co., Chicago, and covers the company's Sunnyday boilers, Sunnybase panels and Sunnyray radiation.

The book has been segregated by type of product and boilers listed by type of firing and capacity. The boiler price includes all of the material shown as standard equipment.

Uniformity of ratings, consistent with I-B-R regulations are shown for all boilers.

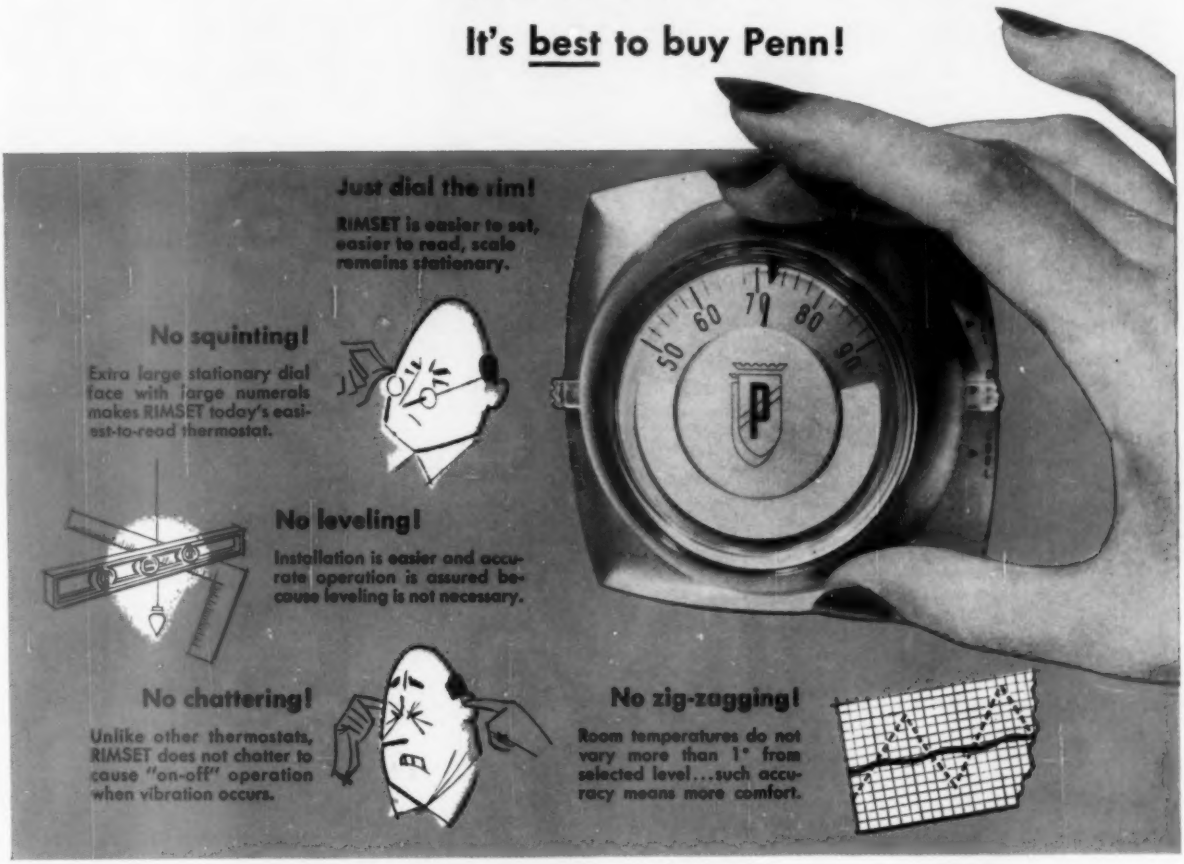
GOING-GOING-GONE
THEY SELL!
Klemm® MICRO
FUEL OIL FILTERS
KLEMM FUEL OIL FILTERS never stay long on your shelves. Good design and performance, attractive packaging and prices make them sure-fire best sellers . . . the kind that puts profit in your pocket.
Always stock KLEMM . . . they sell!
PK-150 U/L
JR-60
FF-430 U/L
FF-430G
SEND FOR complete literature and prices. Do it today.
Millions Since 1932
KLEMM PRODUCTS
Division of
KLEMM AUTOMOTIVE PRODUCTS COMPANY
1722 North Damen Avenue • Chicago 47, Illinois
EXPORT: Guiterman Co., Inc., New York 4
CANADA: Elgee, Ltd., Toronto

COMPARE

...only PENN'S RIMSET has all these thermostat features

Take a few minutes to compare room thermostats... you'll discover *only* the Penn RIMSET brings you *all* the selling advantages shown below. In addition, it has beautiful, distinctive styling that's at home in any home. And, RIMSET is so versatile! Various subbases are available for 12 different heating and cooling applications. Thus, if cooling is added later, simply change the subbase and use the *same* thermostat. So... take a few minutes to compare and you, too, will discover...

It's best to buy Penn!


Just dial the rim!
RIMSET is easier to set, easier to read, scale remains stationary.
No squinting!
Extra large stationary dial face with large numerals makes RIMSET today's easiest-to-read thermostat.
No leveling!
Installation is easier and accurate operation is assured because leveling is not necessary.
No chattering!
Unlike other thermostats, RIMSET does not chatter to cause "on-off" operation when vibration occurs.
No zig-zagging!
Room temperatures do not vary more than 1° from selected level...such accuracy means more comfort.
50
60
70
80
90
P

PENN CONTROLS, INC. Goshen, Indiana

EXPORT DIVISION: 27 E. 38th ST., NEW YORK, N.Y.

AUTOMATIC CONTROLS FOR HEATING, REFRIGERATION, AIR CONDITIONING, APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

fueloil & oilheat

Airconditioning & Heating Division formed by Welbilt

PETER DALTON will be sales manager of the new Airconditioning & Heating Division recently formed by Welbilt Corp., Maspeth, N. Y.

Products of the division include both air-cooled equipment and air- and water-cooled equipment for industrial and commercial use. Heating equipment will include oilfired forced air furnaces in Hi-boy, Lo-boy counter-flo and horizontal models, ranging from 80,000 Btu to 195,000 Btu.

These products will be distributed exclusively through franchised dealers and wholesalers.

Barometric draft control Guide is issued by Field

NEWLY-REVISED is a 20-page Barometric Draft Control Handbook and Installation Guide offered by Field Control Division, H. D. Conkey & Co., Mendota, Ill.

Sections deal with proper selection and installation of draft controls, how and where to install them, what size to install and instrument-setting instructions. Copies are available from the company.

THE GREAT NEW IMPROVEMENT IN
OIL BURNER FUEL FILTRATION . . .

wix®
SPIN-ON TYPE
OIL BURNER FILTER

- Exclusive POROSITE pleated paper filtrant
- Over 228 square inches of filtering surface
- Removes even microscopic contaminating particles
- Guaranteed to exceed 120 gph gravity flow
- COMPACT! 5-9/16" high, 2-3/4" wide, 8 ounces
- Listed as Standard by Underwriters Laboratories, Inc.

This revolutionary, *new* WIX Oil Filter easily replaces *all* comparable standard fuel oil filters . . . makes cartridge servicing simpler and more profitable. Just a "twist-of-the-wrist" does it—no tools, no filter pot to clean out! It's the self-contained unit that brings new efficiency and new economy to every oil burner operation.

Install this WIX Fuel Filter on all the burners you service or install—speed up your maintenance, increase your profit margin. Merely insert the die-cast aluminum head in any ⅜" N.P.T., one or two pipe (high or low pressure) oil burner system and . . . SPIN-ON the WIX Filter Cartridge! That's all there is to it. From then on, servicing requires only changing the Cartridge—no mess, no trouble, no time wasted—spin-off and discard the old—SPIN-ON the new!

Head and Filter are constructed of lightweight, rust and corrosion-proof aluminum with the Head featuring an *exclusive* air bleed and a safety locking screw. WRITE, today, for details on how this great, new WIX "SPIN-ON" Fuel Filter can work and make money for you!

wix®
OIL BURNER FILTERS
WIX CORPORATION • GASTONIA • N. C.
In Canada: Wix Corporation Ltd., Toronto

Perfection Industries names 14 wholesaler Distributors

PERFECTION INDUSTRIES, Division of Hupp Corp., Cleveland, has named 14 additional wholesaler distributors for furnaces, airconditioning and heat pumps.

This is a part of Perfection's program to expand distribution through independent wholesalers. The new appointments are nation-wide extending from Arizona to such northern states as Massachusetts and Montana.

Swiss Subsidiary will handle General's international Trade

A SWISS CORPORATION, General Controls Societé Anonyme (S.A.) at Fribourg has been formed by General Controls Co., Glendale, Calif. The new subsidiary is designed to handle all international operations, except North American activities.

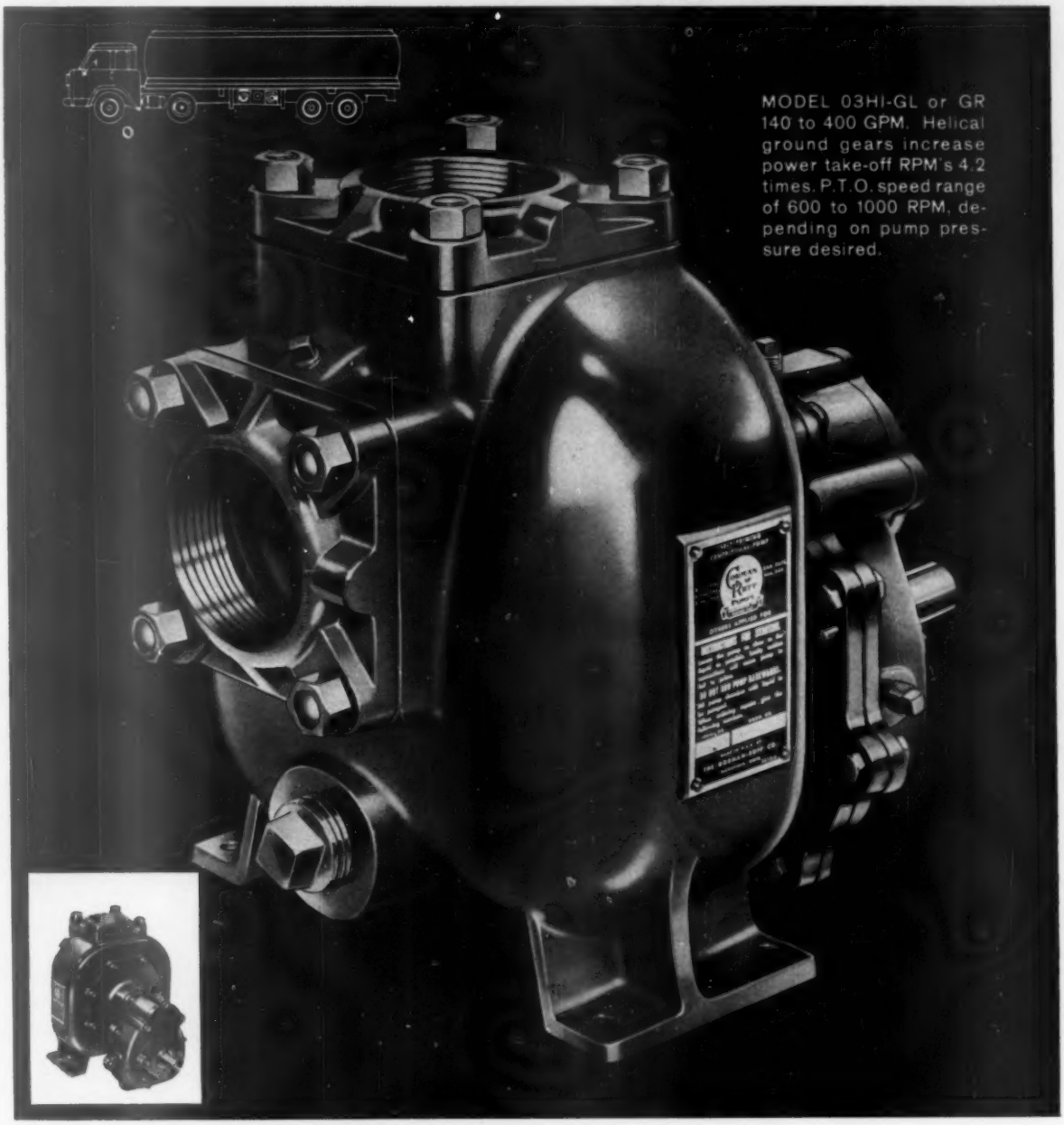
General Controls also recently acquired a firm in Essex, England, now called General Controls, Ltd., which will manufacture the company's precision potentiometer.

Howard Railey has been chosen director of the Swiss company and he will work directly with Remy H. Ludwig, director of the International Division.

BY GORMAN-RUPP A NEW PUMP FOR BULK DELIVERIES FROM BIG RIGS

140 to 400 GPM—another in the famous family of Gorman-Rupp *Centrifugal Pumps That Prime.* No check valve. Positive priming. Designed for trouble-free delivery into bulk plant tank, for aircraft ground service or wherever high capacity and pressure is required. See your Gorman-Rupp Dealer today.

THE GORMAN-RUPP COMPANY
305 Bowman Street • Mansfield, Ohio



MODEL 03HI-GL or GR 140 to 400 GPM. Helical ground gears increase power take-off RPM's 4.2 times. P.T.O. speed range of 600 to 1000 RPM, depending on pump pressure desired.

The Coffey Brothers watch their trainer put a horse through his paces. Behind them is their home stable at Vernon Downs, Vernon, N. Y.

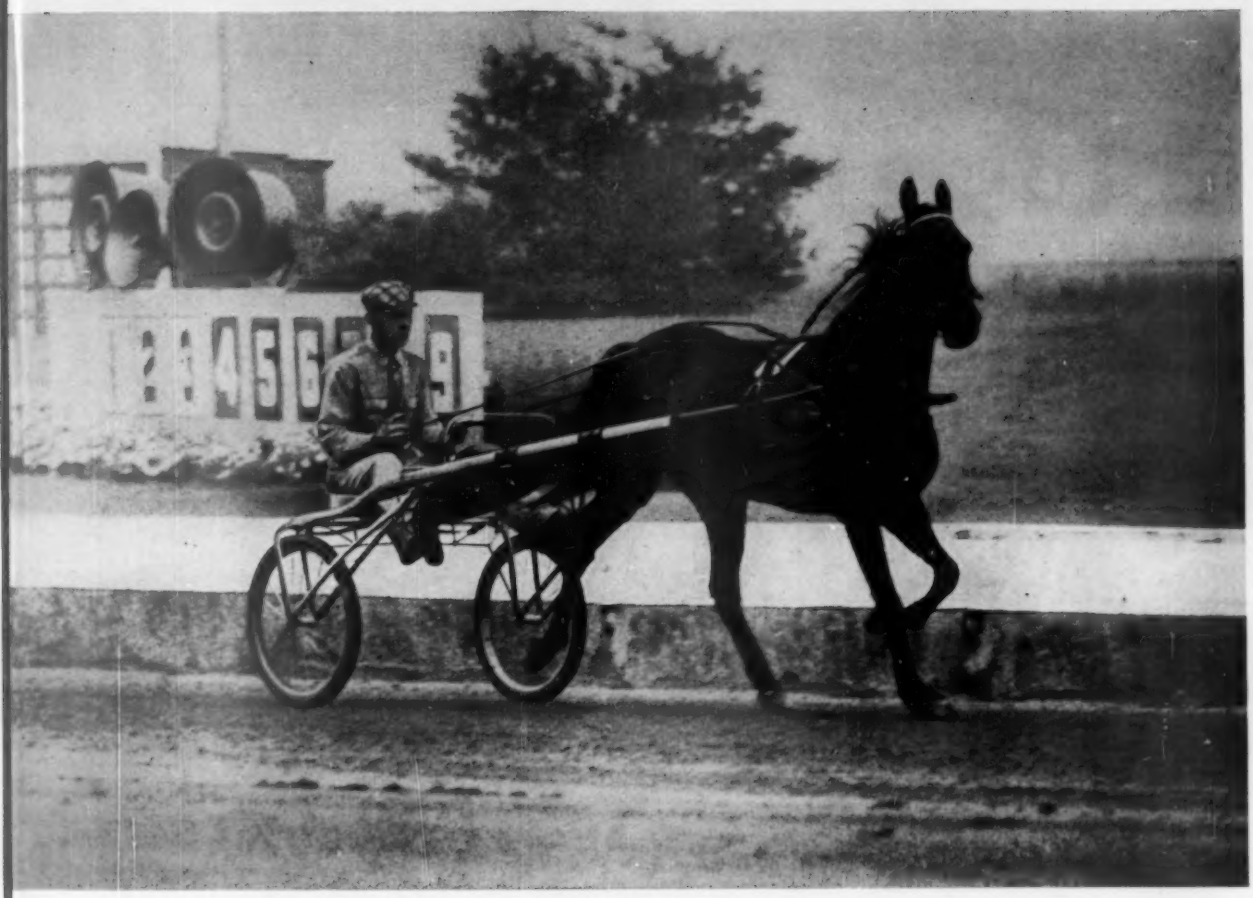
Solar Heat Dealers Trot Ahead of Competition

Coffey brothers work together to operate successful fuel business and trotting stable

EDWARD and FRANCIS COFFEY have been successful Gulf fuel oil dealers in Albion, New York, for 27 years. They also are partners in a trotting stable, with five horses in their string.

"We like to work together and have fun together, too," says Edward. "And selling Gulf Solar Heat gives us the chance to do both."

Buying, selling and trading horses is almost as much fun for Edward and Francis Coffey as racing them. Here is Francis with a favorite—money winner in 23 out of 25 races.



"Service calls have never been a serious problem for us," adds Francis. "We've been able to use a lot of the time saved to spend with the horses. And with new Gulf Solar Heat, our business is bigger and service problems fewer today than ever before."

Action photographs of favorite horses and views of their business, too, line the walls of Francis and Edward Coffey's business office in Albion.

Of course customers of Coffey Brothers, Inc. are satisfied with Gulf Solar Heat. It burns cleaner because it's hydrogen-purified.

Profits are bigger for all Solar Heat dealers because cleaner-burning heating oil means fewer time-consuming service calls.

Are you interested? Then phone your nearest Gulf office collect. You'll get the full story on Gulf Solar Heat and the many advantages open to you as a Gulf Solar Heat brand reseller. Do it today!

(*Begins on page 46*)

Oil Equipment Jobbers annual Convention, Minn.

THE NATIONAL Association of Oil Equipment Jobbers held their ninth annual convention at Hotel Leamington, Minneapolis, September 27-29. The registration, the largest to date, was 504 men and 77 ladies.

There were a number of closed membership sessions, including committee reports, also quite an impressive exposition of products handled by the members.

Speakers at the open sessions were H. E. Andersen, Minneapolis, Eugene de Penaloza, St. Louis, A. F. Woods, Marlow Pumps, Midland Park, N. J. Also Fred Coffield, South Bend, Ind., Dr. George D. Wilkinson, Princeton, N. J., Harry G. Smith, A. O. Smith Corp., Los Angeles, and Robert Gray, editor of FUELOIL & OIL HEAT, New York.

Penazola of St. Louis is the newly-elected president, succeeding Coffield of South Bend. Howard Upton, Tulsa, is the executive secretary. The tenth anniversary convention next year is to be at St. Louis.

This half scale 1910 Model T was awarded by Clifford B. Hannay & Son, Inc., Westerlo, N. Y., one of the exhibitors at the Oil Equipment Jobbers convention. The car, equipped with a 3 hp engine to run, handle and sound like the original Model T, was won by Roy H. Hale, Oil Equipment Sales and Service, St. Paul, Minn. He had just joined the Association the day of the award.

Delaware Valley Dealers hear Agency Representatives speak

LEE KEELER and Jack Lohmyer, Lee Keeler, Inc., were the speakers at the September meeting of the Delaware Valley Fuel Oil Dealers Association.

Gas competitors will continue their promotional efforts, warned Keeler, to win the new housing developments. He feels that oil will continue to be a superior and more economical fuel in the coming decade, but it is up to the oil industry to step up its promotional effort.

Washington fueloil Dealers call for degree-Day Data

BEGINNING October 1, Washington, D. C. fueloil dealers have been able to dial WE 6-1212 and hear the regular weather report followed by a special report on airport degree-days.

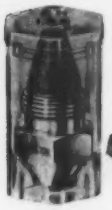
The bulletin of the Oil Heat Institute of Greater Washington explained the system this way: "The recording, for example, will be: 'Degree-days, 10-8-9-15.' The first number will be the degree-days for yesterday, the second number will be the projected total for today, the third number will be the forecast for tomorrow and the fourth number the forecast for the day after tomorrow."

DEPEND ON

Eddington

FOR ORIGINAL INSTALLATIONS

MAINTENANCE & REPLACEMENT PARTS



NOZZLES

The Eddington new one piece porous bronze nozzle filter is another Eddington achievement for smoother trouble-free oil burner service. It is designed to permit the flow to pass through with the least amount of restriction and still give more effective filtering than 200 mesh strainers. Recommended for use on nozzle ranges from .50 gph through 1.00 gph and larger flows if so desired.

FILTERS

Die cast aluminum body. Light weight. Rust and corrosion proof. Large sump. Felt cartridge. Greater filtering surface area. Interchangeable with other makes.

Eddington

High & Low Pressure Nozzles

Combustion Heads

Filters—Strainers

Condensate Disposal Units

Pressure Regulating Valves

Nozzle Adaptors

Air Cones—Stabilizers

Servicemen's Kits

Inspection Mirrors

COMBUSTION HEADS CONDENSATE PUMPS

For high and low pressure type oil burners. Easily adaptable to conventional types. Saves up to 30% in fuel. Model LP53 converts high, to low pressure burners. No change in housing design necessary. Range of capacities from .4 to 2.00 gph.

Removes condensation from air conditioning, refrigeration and dehumidifying units. Compact, dependable. Simplified automatic liquid level control. Pumps heads to heights of 20 ft. Height base to top 10 inches.

OIL BURNER ACCESSORIES

EDDINGTON METAL SPECIALTY COMPANY, EDDINGTON, PENNSYLVANIA

"Our Burroughs Sensimatic Accounting System helped turn a loss into a profit,"

reports Mr. Francis M. Coan,
President and Treasurer,
Coan Brothers,
Natick, Mass.

Coan Brothers has increased its fuel oil sales by four million gallons during the last four years. And they credit much of this increased gallonage to the mechanization of their accounting system with Burroughs equipment.

"We mechanized when we discovered we actually lost money, due to outmoded bookkeeping methods, after what we had thought was a successful season. With our first Burroughs Sensimatic we immediately experienced an astonishing saving in clerical time while improving the efficiency of our whole operation. One girl with this machine does as much as four or five girls with pencil and paper. Our Burroughs Sensimatic posts degree-day ledger, customer's ledger and statement all in one operation.

"We've added a second Burroughs Sensimatic—but no more personnel. Now our Burroughs Accounting System takes our increased volume in stride. We're getting bigger 'drops' and faster payment at less cost.

"We bill customers promptly and they pay faster. Now we needn't borrow—and pay interest on—the money we used to borrow in peak seasons."

Coan Brothers is one of many fuel oil businesses helped to peak efficiency—and marked economy—by a Burroughs Accounting System.

Like to see what Burroughs equipment can do for you? Phone our nearby branch office for a demonstration or write Burroughs Corporation, Burroughs Division, Detroit 32, Michigan. Burroughs and Sensimatic—TM's

Ask to see our film "Break Through for Profit!" No obligation! Prepared in the interest of fuel oil dealers everywhere.

fuel oil & oilheat

Burroughs Corporation

"NEW DIMENSIONS / in electronics and data processing systems"

OHI Dealer Digest to carry names of supporting Firms

STARTING with the October issue, the Dealer Digest, published by the Distribution Division, Oil-Heat Institute of America, Inc., New York will carry the names of manufacturer members of OHI.

The Digest goes to members and carries news about Distribution Division activities. This listing is part of the "Buy OHI" campaign being sponsored by the association.

Maine dealer Association gets Clarification of licensing Law

BECAUSE some members of the Maine Oil & Heating Equipment Dealers' Association were having trouble with local plumbing inspectors, the group requested and got a clarification of the Oil Burnermen's Licensing Law.

According to the attorney general's office a man licensed as an oil burnerman can make connections from oil-fired heating equipment to the water pipes to bring in the water supply.

Philadelphia Fuel Conference begins new Series of Meetings

OCTOBER 27 was the first of a new series of dinner meetings scheduled by the Greater Philadelphia Fuel Conference, under the direction of Bob Gillin, chairman, Membership Meetings Committee. This first meeting was held at the Madison House, Presidential Apartments.

This was devoted to the oilheating advertising, promotion and public relations programs conducted under the banner of the organization's Oil Heat Council. Also, Fred Burroughs, National Fueloil Council, reported on the purpose and function of the NFC, its increasing importance and value and how "2 for 1 helps get the job done."

The business meetings this year again are to be set up as "work shops," covering subjects of current interest.

Old Timers Club convenes at two regional Outings

THE MONTH of September saw two regional outings held by the Old Timers' Club of the Oilburner Industry. The first for members in the Chicago region took place on September 10 at the River Forest golf club; the second for New York-New Jersey-Pennsylvania Old Timers was held on September 24 at the Plainfield (N. J.) Country Club.

Those in attendance at these affairs enjoyed beautifully warm weather, congenial companionship and an all-round good time. Both were Gol-Fun outings, with prizes awarded to duffers and pro's in the golf category and other prizes given to all who remained for dinner.

The committee in charge of the Chicago area party consisted of C. R. Bennett, F. J. Moran and Charles C. Cochran. Arrangement committee for the Plainfield outing was headed by Chris Jensen, assisted by James W. McGuire, Curtis H. Soderberg and Edmund J. Grady.

Old Timers' Chairman Charles Bendix officiated at both parties, awarded the prizes and reminded all members to plan to attend the Annual Jamboree to be held next April during the Oil Heat Exposition in New York.

It really rolls in for the Sinclair Oil Heat Distributor

Right now, the alert businessman who qualifies for a Sinclair Heating Oil franchise can build it into a real money-maker. Four major reasons support this fact:

- **You can offer premium quality products at regular prices. Sinclair Heating Oil contains an exclusive anti-rust ingredient. Result: reduced service calls.**
- **A strong advertising program—designed to be used at the local level—*where it counts most!***
- **A special sales training program—full of profitable new ideas.**
- **An assured product supply—thanks to Sinclair's huge production and ample storage facilities.**

There's much more in the market for you with Sinclair Heating Oil. For details, write: Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

Sinclair
HEATING OIL

Sinclair HEATING OIL SuperFlame

Service-Master costs so much less in the long run that it's actually false economy to settle for any other make. Here's a truck body that has class . . . starting with the way it's put together and ending with the way it stays together without constant upkeep through the life of several chassis. See one, go over it carefully, get all the facts, compare and you'll know why Service-Master is your very best service body buy!

POWERS

Service-Master®

TWO MODELS . . . FOUR SIZES

for ½, ¾, 1, and 1½ ton chassis

A standard Model SM-15 (¾ ton) Service-Master is shown at top left. Below is the same model with a Canopy Top. All bodies are available for immediate delivery in all 48 states.

Before you buy any service body . . .

SEND FOR THIS **FREE 6-PAGE FOLDER**

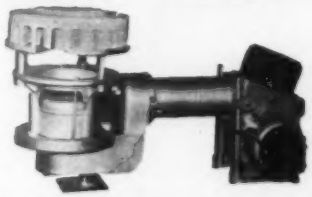
It's loaded with valuable information

McCABE-POWERS BODY COMPANY

5900 NO. BROADWAY • ST. LOUIS 15, MO.

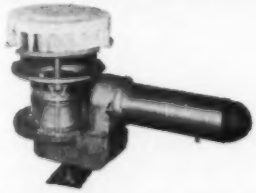
"OILGAS"

The most advanced and economical method to burn fuel oil



OILGAS BURNER UNIT

Thrifty—Simple—Trouble Free



MODEL A .75 to 1.50 GPH "OILGAS COMBUSTION HEAD"

Converts fuel oil to gas with primary air at 400°F and secondary air at 900°F. No combustion chamber required. Has no moving parts or electric heaters. Fits gun burners with 4" air tube.

VIGNERE OILGAS BURNER & MFG. CO.

P.O. Box 416 — New Castle, Penna.

FINENESS AND CAPACITY COMBINED IN COMPACT SIZE!

SETTE

MICROSTONE® ELEMENT **FILTERS**

MODEL MS-3 — Handles 100,000 BTU's, installed at tank or anywhere on line for medium to large oil burning units; much greater than other filters of similar size! Exclusive Microstone ceramic element traps all foreign matter to 1/10,000th of an inch — easily cleaned for re-use. All aluminum construction; easily disassembled without special tools; built-in shut-off valve and air vent; inlet and outlet ⅜" IPT. And the cost is low! _____ **$4.80 EACH**

MODEL MS-3E — Even lower initial cost! Same basic construction as Model MS-3, but without shut-off valve and air vent! A real low-cost attraction! _____ **$4.00 EACH**

SEE YOUR JOBBER — OR ORDER DIRECT! If he cannot supply you we ship postpaid anywhere in U.S.; normal discount in dozen lots.

SETTE PRODUCTS COMPANY

1241 HIGH STREET • OAKLAND 1, CALIFORNIA

Please send the following, postpaid:

_____ doz. Model MS-3; List $4.80 ea.

_____ doz. Model MS-3E; list $4.00 ea.

Name _____

Address _____

City _____ State _____

Export Div.: OCEANIC EXPORT CO. • 400 Montgomery St., San Francisco 4

'Little Bill' Impact measured by Association in New York

TO DISCOVER what impression "Little Bill" has made on the average listener, the Better Heat with Oil Council, Inc., New York, authorized a survey conducted by Psychological Corp.

The survey was made late in July, approximately two-and-one-half-months after the conclusion of the group's spring program that had utilized the character, "Little Bill," to emphasize oilheating's economy.

The study revealed: that more than 50% of the three million listeners remembered hearing "Little Bill." Over 30% of those who remembered are users of gas or coal for heating. "Little Bill" was associated with oil heat by 42% of the listeners and 36% of them associated the slogan with economy. A third of the listeners were able to repeat the commercial, "When you heat with oil—you have a little bill."

Because the results were so conclusive the "Little Bill" theme will be continued 16 times a week over radio stations WOR, WNEW and WMGM A new format has been devised for this year's presentations, and sound effects will be used to attract attention and to dramatize the selling points of oilheating.

The group is also continuing to run testimonial ads in five metropolitan newspapers. These ads carry the headline, "I switched back to oil heat," and carry the message that substantial savings resulted.

Independent Marketers back Research for new Oilburner

MORE THAN $120,000 has been raised by a group of independent marketers to be invested in the search for a new oilburner that can compete more readily on a cost basis with gas burners.

Goal of the research project is to raise $300,000 to be spent over a three year period. Present participants in the program are William Briggs, Valley Oil Co., Middletown, Conn.; Leon Hess, Hess, Inc., Perth Amboy, N. J.; William Kenny, Jr., Meenan Oil Co., New York; Gordon McMehen, Parfield Oil Co., Ottawa, Canada; John and Thomas Scott, Buckley & Scott, Watertown, Mass.; Lorne Webster, Canadian Imports, Montreal; Jet Heet, Inc., Englewood, N. J., and the Toronto Chapter, Oil Heat Associates of Canada.

Called Operation Oil Heat Associates, the group has invited other oilmen to participate in the program. A share ($10,000) may be purchased by an individual or several dealers can go together on the investment.

Ralph Cook elected President of Central Supply Association

EARLY IN OCTOBER, at the Chicago annual meeting, Ralph V. Cook, Cook Supply Co., Oklahoma City, Okla., was elected president of the Central Supply Association.

Approximately 1,500 members and guests attended the meeting which also named the following officers: John Robertson, first vice-president; Harold T. Davidson, second vice-president; Paul Aronhalt, treasurer; and H. B. Holihan, honorary president.

James H. Perry is secretary and Durward Humes is assistant secretary.

LOW COST HOT WATER... for Laundries / Apartment Houses / Motels

PENN hot water supply boilers

- Seven models . . . with capacities to heat from 107 to 1,000 gallons of water at a temperature rise of 100 degrees per hour
- Heavy boiler plate construction . . . all surfaces in water are hot dip galvanized
- Package units, ready to operate . . . complete with burner and all controls
- Baked enamel steel jacket . . . fully insulated

Constructed in accordance with ASME standards for hot water boilers

See your wholesaler or write direct for literature

PENN BOILER AND BURNER MFG. CORP.
Sales Office: 95 Empire St., Newark, N.J.
Phone Bigelow 3-0200 Factory: Lancaster, Pa.

WHISTLER

The only fill-signal you can install in existing systems without disturbing the present piping!

APPLIED MECHANICS COMPANY
381-389 CONGRESS ST., BOSTON 10, MASS.

There's Only One ORIGINAL

SHELL-DESIGNED Combustion Head

An outstanding contribution to Oil Heat. Field-tested through hundreds of thousands of installations operating at peak efficiencies!

The Shell Combustion Head Does Not Cost—It Pays!

The boiler or furnace you install is no beter than its burner.

Absolutely **NO** SMOKE SOOT

. . . highest CO_2!

Available to Burner Manufacturers Only—

MODERN DIE & MACHINE CO.
BOSTON 25, MASSACHUSETTS

"Instrument check-ups open the doors to profitable equipment sales."

FYRITE SERVICE KIT

. . . QUALITY INSTRUMENTS that Pay for Themselves

$52.30 FACTORY NET

Sold by Alert Heating Jobbers

The FYRITE Service Kit provides a complete set of accurate, quality-built combustion-testing instruments at the lowest cost. It includes the FYRITE CO_2 Indicator which is unsurpassed for fast, accurate flue gas analysis; and also contains the popular DRAFTRITE Draft Gauge and the TEMPOINT 200°-1000°F. Dial Thermometer.

BACHARACH INDUSTRIAL INSTRUMENT CO.
200 N. BRADDOCK AVE. • PITTSBURGH 8, PA.

Send FREE Bulletin on Profitable Uses of Service Kit

NAME_____

COMPANY_____

STREET ADDRESS_____

CITY & STATE _____

SK-27

National Petroleum Association elects Rexford Blazer President

REXFORD S. BLAZER, chairman of the board of Ashland Oil & Refining Co., was elected president of the National Petroleum Association.

Other officers elected were John E. Selden, South Penn Oil Co., vice-president and L. E. Kincannon, Rock Island Refining Corp., second vice-president. New trustees are: Marc Braeckel, Sinclair Refining Co.; F. O. Koontz, Quaker State Oil Refining Co.; Richard Sauer, The Standard Oil Co. (Ohio); W. E. Smith, Standard Oil Co. (Ky.); and F. Kemmis Cadwell, Union Oil Co. of California.

Among the officers re-elected were Fayette B. Dow, general counsel; Donald C. O'Hara, assistant general counsel; E. H. Fallin, technical and safety director; Roy Simmons, attorney; O. P. Keeney, recording secretary; G. B. Hunter, treasurer; and Margaret A. Miller, assistant treasurer.

Green tubes mean greenbacks for you . . .

Green is your lucky color . . . *green Honeycomb Filter Tubes,* that is. They put greenbacks in your pocket because they eliminate costly service calls due to oil impurities. The reason is simple but powerful — new green Honeycomb Filter Tubes are the latest scientific development in fuel oil filtration. Best of all, they're priced so low you can select the best without paying more. So look for the *green* Honeycomb Filter Tube in the *green* wrapper. It means more greenbacks for you.

COMMERCIAL FILTERS CORPORATION
MELROSE 76, MASSACHUSETTS
PLANTS IN MELROSE, MASSACHUSETTS AND LEBANON, INDIANA

Influence of Airconditioning

(*Begins on page 79*)

hoped to continue this test for at least two years, which would have been long enough to reveal an accurate measurement of the increased production. But since performance of the particular task involved in this test serves as a stepping stone for the advancement of the employees, there is a considerably greater than average turnover of personnel. As noted earlier, the number of employees participating dropped from 140 to 124.8 in the five-month test period, due to reassignments, marriages, etc. At this rate, the test and control groups would soon have dwindled to the point where the study would have no meaning.

The records for the five-month test period show that the work production of the group in the airconditioned space varied all the way from 6.5% to 13.5% higher than that of the employees in the control area. Weather Bureau data for the period furnished no definite clues to this varied production curve. Neither could the occupying agency pinpoint the reason for this variation.

It is known to the agency, however, that this difference is typical of employees working on this assignment, as it had been observed for many years that such employees' production varied from month to month by a few per cent. The difference in time required to complete a search can vary a great deal, depending upon the case—one search may take hours, and another only a few minutes. Generally the total number of completed searches averages out the same from month to month.

In the light of these observations it would seem logical that the employee's outside activities, which are a recognized factor in work production, were probably largely responsible for the variation in production.

Despite the "unknowns" in this study, the 9.5% average production increase in the airconditioned test area over the rate of production in the non-airconditioned control area is very significant. We know, from our previous studies, that a seven-minute saving in time per employee per day will

YOUR CUSTOMER PREFERENCE CAN BE MET WITH ONE LINE!

...PLUS MANY DESIRABLE DEALER AIDS

- Direct Dealer Franchise
- Complete line—Oil—Anthracite—Gas Boilers and Furnaces–Cast Iron and Steel
- Cooperative Advertising Program
- Equipment Display Plan
- Competitive Prices
- Field Assistance
- Dealer Sales and Service Bulletins
- Installation and Service Training
- Consumer Acceptance

You'll find many profit advantages with E.F.M.'s full line—Write or Call Today—

e·f·m The Finest in AUTOMATIC HEAT

ELECTRIC FURNACE-MAN INC., EMMAUS, PA.

FURNACE BURNER UNITS—BOILER BURNER UNITS—CONVERSION BURNERS
OIL—ANTHRACITE—GAS

Stop Oil Leaks!

WITHOUT DOWN TIME and with UNIT in SERVICE!

Users' Reports Tell How OYLTITE-Stik can help you

". . . to make instant repairs on basement storage tanks . . . a great time saver."
A New York Oil Distributor

". . . on seams of large oil tanks where weld was not perfect."
A Wisconsin Fuel Company

". . . we punched a hole in the tank with an ice pick, then filled the tank and plugged the hole with the oil running out; it has held for months."
A Maryland Contractor

". . . to seal small holes of oil storage tanks, created through condensation."
An Illinois Contractor

". . . has done such a good job we do not want a service man to be without one."
A Pennsylvania Heating Company

". . . to repair leaks in domestic tanks inaccessible for repair by other methods . . . most satisfactory."
A Canadian Contractor

OYLTITE-Stik is one of the best time-savers and trouble-stoppers you can find.

• See your suppliers for OYLTITE-Stik or write direct on company letterhead for free sample.

LA·CO

LAKE CHEMICAL CO.

3086 W. Carroll Ave., Chicago 12, Ill.

40 VALUE-PLUS MODELS FROM ½ TO 2 TONS

Bodies you can depend on—best built in the industry—with many "plus" features at no extra cost. Compare Morysville's wide selection feature by feature with *any* others. You're sure to find "More for your Money in Morysville".

MORYSVILLE Body Works INC.
BOYERTOWN, PA.

IMMEDIATE DELIVERY
WIDE RANGE OF OPTIONAL EQUIPMENT

National Distribution — Inquire today for the name of your nearest distributor

Write for FREE Literature

more than pay for the expense of an airconditioning system. In other words, if work production increases only 1.5% per year, the system will pay for itself through savings in salaries. We feel certain that the increase in production will never drop below this value.

During the test period the best work production in the nonairconditioned area occurred in June and September; in the airconditioned area production was highest in June, July and September. The low point in the airconditioned space was in August, and probably was related to the outside weather, (which was hot and humid), to which the employees were subjected during off-duty hours. If it were possible to run a test under controlled laboratory conditions, the reason for these differences in productivity might be found.

b. Decrease in Errors:

In some months more errors were made in the airconditioned area than in the nonairconditioned. There was an average 0.9% increase in errors per person per month in the control area—a figure which is for all practical purposes identical with the average in the test area and does not permit reaching any definite conclusions. In this particular operation, accuracy is more important than production. If an employee has an abormal number of errors per year he is reassigned to less exacting duties, so it is safe to assume that all employees keep their errors to a minimum and that the percentage of errors is fairly constant.

c. Decrease in Absenteeism:

Accurate records were kept of all sick leave taken and its causes. All absences positively not associated in any way with airconditioning or the lack of it (fractured bones, operations, abcesses, skin rashes, bronchitis, etc.) were disregarded for purposes of this survey. This left only minor ailments such as headaches, upset stomach, etc., to be considered. While we suggest that no definite conclusions be drawn from this test, it is interesting to note that in the nonairconditioned area the absenteeism was 2.5% higher than in the airconditioned space. This is the more astounding considering that the groups mixed with each other and strangers at lunch time, rest periods, in stores, on streets, and in public conveyances for the major portion of the day, and therefore were exposed to all kinds of diseases prevailing in the community.

d. Intangible Effects:

It was interesting to talk to people

NOW a completely STAINLESS STEEL HUMIDIFIER

• Stainless for greater sales appeal — more profit. • Re-engineered to avoid troublesome "call-backs" • Water leveling type . . . new type diaphragm seat. • Adjustable to water pressure level.
• Competitively priced.
• Guaranteed.

the Vaporite NO. 999

Write today for Free Illustrated Literature

AUTOMATIC HUMIDIFIER CO. • CEDAR FALLS, IOWA

KENITE LABORATORY
MADISON, NEW JERSEY

CLEARITE TESTER

PROVIDES COMPLETE CHECK ON OIL PUMP AND SUCTION LINES

- BLEEDS PUMP QUICKLY — NO MESS
- INDICATES DIRT AND WATER IN OIL
- CHECKS PRESSURE TO NOZZLE
- SHOWS POOR PUMP CUT-OFF
- TELLS BY VACUUM IF PUMP IS GOOD
- SUCTION LINE LEAKS FOUND EASILY
- SHOWS SUCTION LINE RESTRICTIONS
- FITS ANY MAKE AND STYLE PUMP
- SELLS FILTERS, FUEL PUMPS, SOLENOID VALVES AND NOZZLES
- SAVES TIME — AVOIDS CALL-BACKS

The Clearite gives an answer to virtually every problem that could exist in supplying fuel oil from the tank to the nozzle. Easy and quick to use. Instructions provided.

For Information Write To ➔

JAY ZEE MFG. CO.
BOX 147 OAK LAWN, ILL.
GArden 2-4459

FOR BURIED TANKS

You Can't Beat
FUELGUARD!
The only Remote Reading tank gauge that will fit ANY size tank . . . ANY distance away . . . WITHOUT PIPES OR WIRES!

Write for information today
R. S. TEESDALE CO.
2830 Woodcliff St., S.E. Grand Rapids 6, Mich.

RAJAH TERMINALS

FOR OIL BURNER SPARK PLUG IGNITION CONNECTIONS
Made in Two Styles
CRIMP TYPE and SOLDERLESS

Code No. C/T #11

Code No. S-SOS #11

THE RAJAH CO., 35 Verona Ave., Newark, N. J.

Branford

Model DO
5. to 14. GPH

Model J-3
.75 to 1.75 GPH

BRANFORD offers a complete line of SHELL HEAD models from .75 to 20. GPH

Before you buy your next oil burner, write us for complete information on BRANFORD BURNERS.

Branford Tank & Heating Products, Inc.
286 Howe Avenue Shelton, Conn.

ALLEN

84-4 Duo-Control Booster Fan

Excellent for Supplying More Basement Heat with Warm Air Jobs

24-Volt motor, supplied from low-energy transformer (U.L. Approved), permits installation even in strict city code areas. No service problems—special bearings, with large high-temperature oil reservoirs, assure trouble-free performance. Ideal for extra-long duct runs. Package includes Booster Fan, M-H T-83 Room Thermostat, and M-H AT-72 Transformer.

At your Jobber, or Write:

PARK HEATING SPECIALTIES
6212 Goodrich Avenue, Minneapolis 16, Minn.

In New England and New York: **Howard Nunnally Associates, 639 S. Warren St., Syracuse, N. Y.**

Light Duty Service

OPW LOADING ASSEMBLIES

FOR LOADING AND UNLOADING BULK LIQUIDS

YOU CAN NOW AFFORD TO DISCARD YOUR MAKE-SHIFT LOADING DEVICES. INSTALL ONE OF THESE LONG-LIVED, TOP QUALITY, COMPLETE ASSEMBLIES, DESIGNED TO KEEP LOADING COSTS DOWN, DELIVERIES HIGH.

Nos. 720 and 721, high quality Loading Assemblies for small bulk plant operations having gravity flow or pressure up to 30 psi on 2" size, and up to 25 psi on 3" size.

PRICED AS LOW AS $91.35

No. 720
Counter-Balanced unit for easy fast service in general installations.

No. 721
For bulk plants where arm is supported in hanger when not in use.

OPW CORPORATION
2723 Colerain Ave., Cincinnati 25, O. • Phone Kirby 1-5400
VALVES • FITTINGS • ASSEMBLIES FOR HANDLING HAZARDOUS LIQUIDS

in the airconditioned area and hear their reasons for liking to work there. All employees, with the exception of one girl, preferred to work in the airconditioned space and hoped they would not be transferred out of it.

The most important reasons for this preference, from their point of view, are listed below. No attempt has been made to list them in the order of their importance.

1. Considerably less consumption of chilled drinking water.
2. The girls were pleased with the noticeable saving in money on "make-up" and hairdos," attributed to the absence of electric fans and relief from the high humidity which prevails in Washington. It not only saved them money, it boosted their morale to know they still looked their best at the end of a busy day. The money saved was a very important item to these employees.
3. Elimination of wall fans was appreciated by employees for still another reason. No matter where fans used to be placed, there was always disagreement among the employees about where they should be located, and there were complaints about the noise and the blowing of papers on the cabinets.
4. Less soiling of clothing. All employees, both male and female, agreed that their clothing remained cleaner and fresher, and showed less staining due to perspiration and discoloration due to dirt. Many felt they could wear their day clothing to a social function that same night.
5. The majority felt that the heat after working hours did not affect them as much as formerly, when they were subjected to it all day.

Conclusions

On the basis of the evidence, it would seem fair to conclude that the airconditioning resulted in:

1. A substantial average increase in work production (9.5%).
2. A slight decrease in errors (0.9%).
3. A measurable decrease in absenteeism (2.5%).
4. A measurable decrease in employee's living expenses (savings on cleaning bills, hairdos, make-up, etc.).
5. An important contribution to employee comfort and morale.

It is safe to assume that in any other type of office work, where the rate of production is not standardized, or where no minimum requirement must be met consistently, the increase in productivity will be more than enough to pay for airconditioning through savings in employee salaries.

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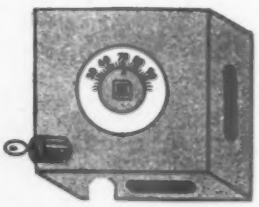

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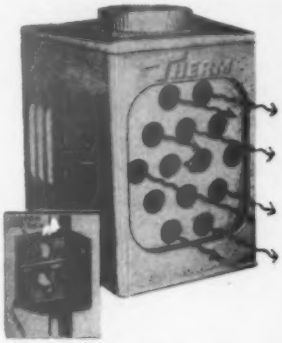

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Method

Fact Finders went to 17 key markets

Fact Finders selected fueloil dealer names at random from Classified Phone Books

Fact Finders personally interviewed 600 dealers on the premises of their firms

Total Dealer Coverage

What magazine was found to have the best coverage of the combination fueloil, oilheating and air conditioning dealers?

Magazines	*% who receive*
FUELOIL & OIL HEAT	80.3%
magazine B	51.5
magazine C	36.2
magazine D	27.8
magazine E	9.0
magazine F	5.8

Magazines "Most Helpful"

What magazine do these dealers find most helpful in conducting their business?

Magazine	*Weighted Ranking**
FUELOIL & OIL HEAT	1510
magazine B	756
magazine C	436
magazine D	331

* Weighted ranking is a recognized statistical measurement. First ranking 4 points, second ranking 3 points, third ranking 2 points, fourth ranking 1 point.

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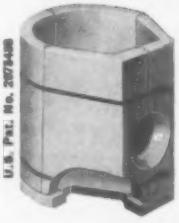

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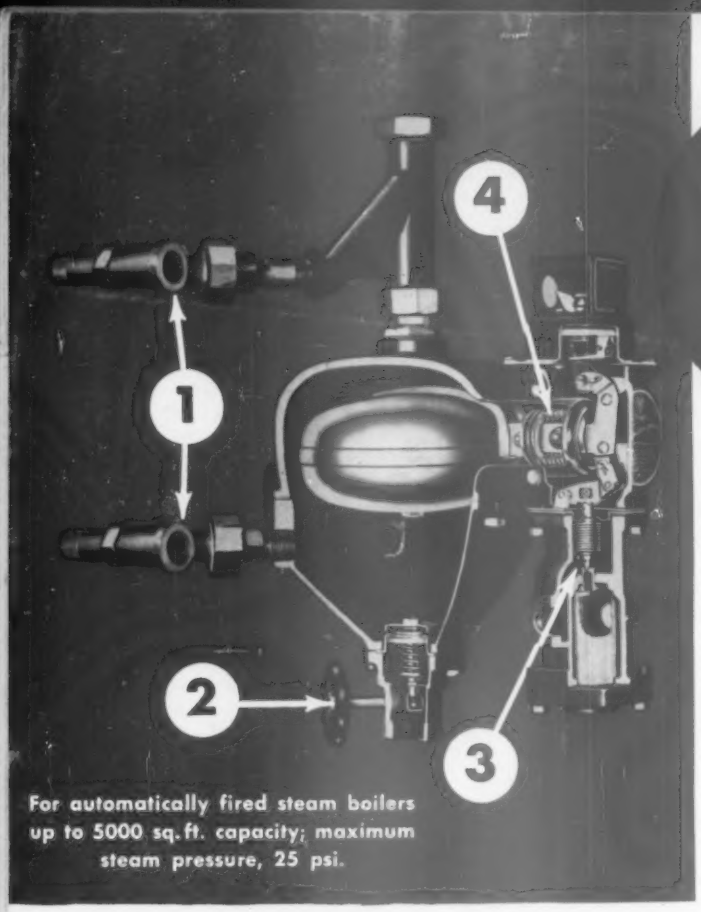

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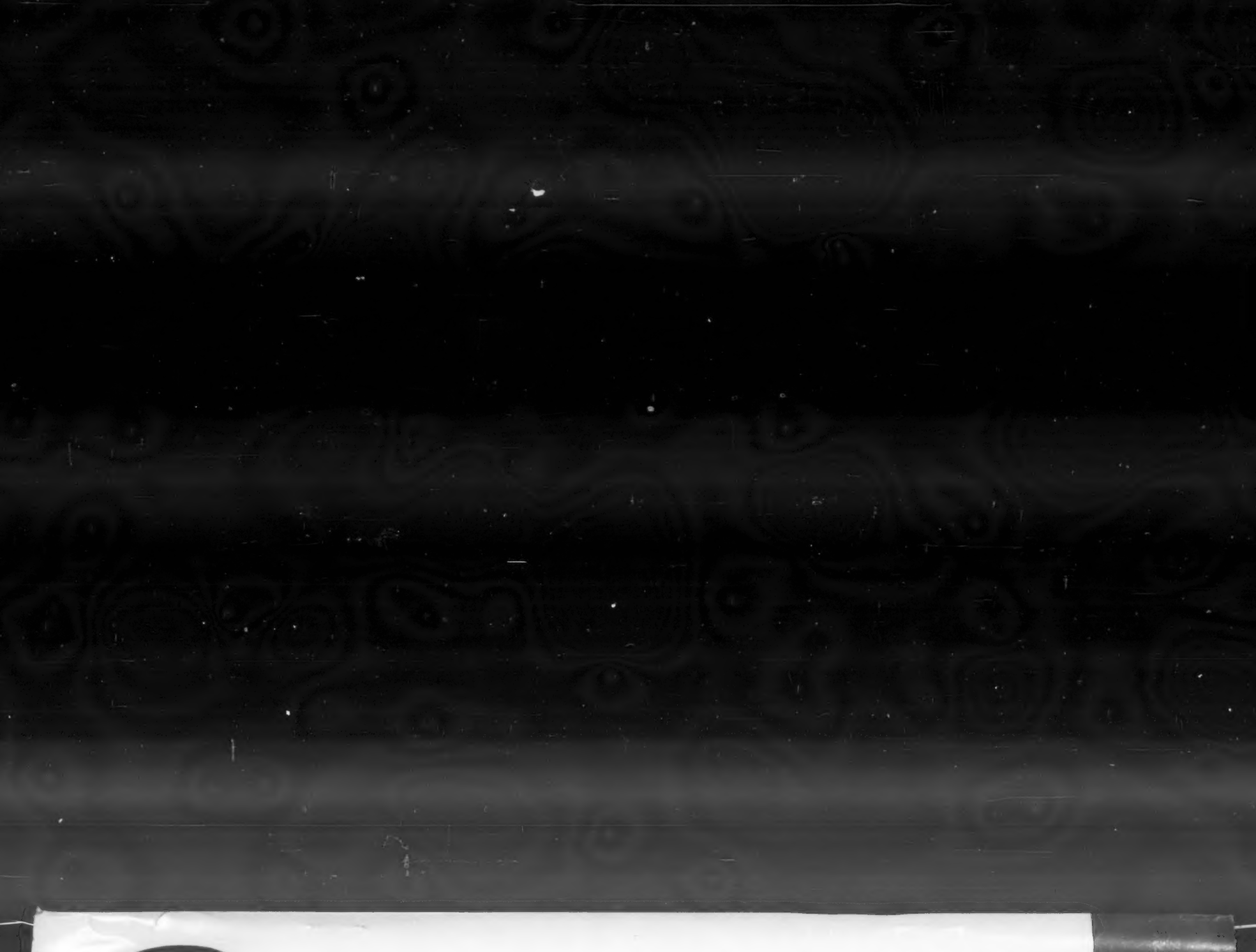
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